

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>		5. MINERAL LEASE NO: <b>ML-47794</b>	6. SURFACE: State
1A. TYPE OF WORK: <b>DRILL <input checked="" type="checkbox"/></b> <b>REENTER <input type="checkbox"/></b> <b>DEEPEN <input type="checkbox"/></b>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
B. TYPE OF WELL:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____    SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		8. UNIT or CA AGREEMENT NAME: N/A	
2. NAME OF OPERATOR: <b>Summit Operating, LLC</b>		9. WELL NAME and NUMBER: <b>State 8-32-13-22</b>	
3. ADDRESS OF OPERATOR: <b>2064 Prospector Ave</b> <small>CITY</small> <b>Park City</b> <small>STATE</small> <b>UT</b> <small>ZIP</small> <b>84060</b> <small>PHONE NUMBER:</small> <b>(435) 940-9001</b>		10. FIELD AND POOL, OR WILDCAT: <b>Seep Ridge Wildcat</b>	
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: <b>1978' FNL, 824' FEL</b> <i>631146 X    39.644976</i> AT PROPOSED PRODUCING ZONE: <b>1978' FNL, 824' FEL</b> <i>4389264    -109.471564</i>		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SENE 32 13S 22E S</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>44 miles south of Ouray, Utah</b>		12. COUNTY: <b>Uintah</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>824'</b>	16. NUMBER OF ACRES IN LEASE: <b>640</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>See attached map</b>	19. PROPOSED DEPTH: <b>11,650</b>	20. BOND DESCRIPTION: <b>N2315</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6623' GR</b>	22. APPROXIMATE DATE WORK WILL START: <b>2/1/2006</b>	23. ESTIMATED DURATION: <b>28 Days</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH
12-3/4"	9-5/8"	J-55 LT&C	36#	2,000
7-7/8"	5-1/2"	N-80 LT&C	17#	11,650

CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT				
HHF	350 Sacks	3.2 cu ft/sk	11.6 ppg	
Premium	200 sacks	1.17 cu ft/sk	15.8 ppg	
Super flush/water			2.2 B 33 ppg	
50/50 Poz Premium AG	450 sacks	1.49 cu ft/sk	12.5 ppg	
Hi Fill Mod	415 sacks	3.85 cu ft/sk	11.9 ppg	
Premium AG	50 sacks	1.15 cu ft/sk	15.8 ppg	

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Larry W. Johnson    TITLE Agent for Summit Operating, LLC

SIGNATURE *Larry W. Johnson*    DATE 12/14/05

(This space for State use only)

API NUMBER ASSIGNED: 43-047-37521

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

Date 02-16-06  
By: *[Signature]*  
(See Instructions on Reverse Side)

**RECEIVED  
DEC 15 2005  
DIV. OF OIL, GAS & MINING**

**CONFIDENTIAL**

# Range 22 East

(S89°59'W - 5281.32')

## Location:

The well location was determined using a Trimble 5700 GPS survey grade unit.

## Basis of Bearing:

The Basis of Bearing is GPS Measured.

## GLO Bearing:

The Bearings Indicated are per the recorded plat obtained from the U.S. Land Office.

## Basis of Elevation:

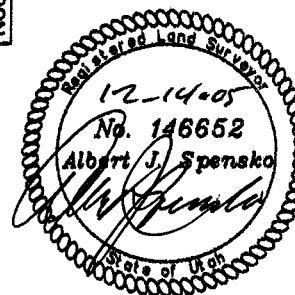
Basis of Elevation of 6849.0' being at the West Quarter Corner of Section 2, Township 14 South, Range 22 East, Salt Lake Base & Meridian, as shown on the Bates Knolls Quadrangle 7.5 Minute Series Map.

## Description of Location:

Proposed Drill Hole located in the SE1/4 NE1/4 of Section 32, T13S, R22E, S.L.B.&M., being 1978.38' South and 824.47' West from the Northeast Corner of Section 32, T13S, R22E, Salt Lake Base & Meridian.

## Surveyor's Certificate:

I, Albert J. Spensko, a Registered Professional Land Surveyor, holding Certificate 146652 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my personal direction and supervision as shown hereon.



## GRAPHIC SCALE

0 500' 1000'  
( IN FEET )  
1 inch = 1000 ft.

## NOTES:

1. UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 Datum.

LAT / LONG  
39°38'42.038" N  
109°28'15.082" W

## Legend

- Drill Hole Location
- ⊕ Brass Cap (Found)
- Brass Cap (Searched for, but not found)
- △ Rock Pile
- ( ) GLO
- GPS Measured

Township 13 South

(N00°03'W) - 5277.81'

(N00°03'W)

STATE #8-32-13-22  
ELEV. 6622.7'

UTM  
N 4389266  
E 631207

32



## TALON RESOURCES, INC.

195 North 100 West P.O. Box 1230  
Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talon@etv.net

## SUMMIT OPERATING

State #8-32-13-22  
Section 32, T13S, R22E, S.L.B.&M.  
Uintah County, Utah

Drawn By: J. STANSFIELD	Checked By: L.W.J./J.S.H.
Drawing No. A-1	Date: 11/09/05
	Scale: 1" = 1000'
Sheet 1 of 4	Job No. 2084

EXHIBIT "D"  
DRILLING PROGRAM

Attached to UDOGM Form 3  
Summit Operating, LLC  
**State 8-32-13-22**  
SE/4 NE/4, Sec. 32, T13S, R22E, SLB & M  
1978' F&L, 824' FEL  
Uintah County, Utah

1. The Geologic Surface Formation

Green River

2. Estimated Tops of Important Geologic Markers

KB	Ground + 22'
Wasatch	1829'
Mesaverde Group	3629'
Castlegate	5509'
Mancos Shale	5849'
Dakota Silt	9592'
Dakota Marker	9642'
Morrison	9897'
Summerville/Curtis	10377'
Entrada Sandstone	10442'
Carmel	10602'
Navajo Sandstone	10672'
Kayenta	10792'
Wingate Sandstone	11927'
Triassic Chinle	11327'
Triassic Shinarump Conglomerate	11497'
Triassic Moenkopi	11532'

3. Projected Gas & Water Zones

No Groundwater is anticipated to be encountered. Water encountered will be reported on a Form 7 "Report of Water Encountered During Drilling".

Casing & cementing will be done to protect potentially productive hydrocarbons, lost

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circulation zones, abnormal pressure zones, and prospectively valuable mineral deposits. All indications of usable water will be reported.

Surface casing will be tested to 1500 psi for 15 minutes. Pressure drop is not to exceed 150 psi.

7) The Proposed Casing and Cementing Programs

**Casing Program**

HOLE SIZE	SETTING DEPTH (INTERVAL)	SIZE (OD)	WEIGHT, GRADE & JOINT	CONDITION
12-1/4"	2000'	9-5/8"	36# J-55 LT&C	New
7 -7/8"	11,650'	5-1/2"	17# N-80 LT&C	New

**Cement Program**

Surface Casing:

Lead: 350 sacks HHF

Weight: 11.6 # / gal

Yield: 3.2 cu.ft / sk

Tail: 200 sacks Premium

Weight: 15.8 # / gal

Yield: 1.17 cu.ft / sk

Production Casing: Two stage with multiple stage cementer placed at 9,400'

*Stage 1:* Lead: Super flush / water

Weight: 9.2 # / gal / 8.33 #/gal

*Stage 2:* Lead: 415 sacks Hi Fill Mod

Weight: 11.0 #/gal

Yield: 3.85 cu.ft / sk

Tail: 450 sacks 50./50 Poz Premium AG

Weight: 13.5 #/gal

Yield: 1.49 cu.ft/sk

Tail: 50 sacks Premium AG

Weight: 15.8 #/gal

Yield: 1.15 cu.ft/sk

The following shall be entered in the driller's log:

- 1) Blowout preventer pressure tests, including test pressures and results;
- 2) Blowout preventer tests for proper functioning;
- 3) Blowout prevention drills conducted;
- 4) Casing run, including size, grade, weight, and depth set;

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- 5) How the pipe was cemented, including amount of cement, type, whether cement circulated, location of the cementing tools, etc.;
- 6) Waiting on cement time for each casing string;
- 7) Casing pressure tests after cementing, including test pressures and results.

5. The Operator's Minimum Specifications for Pressure Control

Exhibit "G" is a schematic diagram of the blowout preventer equipment. An 11" 5,000 psi Double gate Hydraulic BOP with one (1) blind ram and one (1) pipe ram and Annular Preventer; equipped with a 3,000 psi automatic choke manifold. The BOP will be tested and charted using a BOP tester and test plug to 5,000 psi for 10 minutes. The Annular Preventer will be tested to 2,500 psi for 10 minutes. All text will be recorded in the Driller's log book. Physical operation of the BOP will be checked on each trip.

6. The Type and Characteristics of the Proposed Circulating Muds

Surface hole will be drilled with air/mist/foam  
Long string hole will be drilled with KCL/gel/chem. mud

7. The Testing, Logging and Coring Programs are as followed

Testing –

DST's are not planned

Logging –

End of Surface casing - TD    Gamma Ray, Density-Neutron Porosity,  
Induction, Caliper, Sonic

Coring --

No coring is planned for this location

Any Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures have been noted or reported in wells drilled in The area nor at the depths anticipated in this well. Bottom hole pressure expected is 3,800 psi max. No hydrogen sulfide or other hazardous gases or fluids have been found,

reported or are known to exist at these depths in the area.

8. Anticipated Starting Date and Duration of the Operations.

The well will be drilled approx.: February 1, 2006

Verbal and/or written notifications listed below shall be submitted in accordance with instructions from the Division of Oil, Gas & Mining:

- (a) prior to beginning construction;
- (b) prior to spudding;
- (c) prior to running any casing or BOP tests;
- (d) prior to plugging the well, for verbal plugging instructions.

Spills, blowouts, fires, leaks, accidents or other unusual occurrences shall be reported to the Division of Oil, Gas & Mining immediately.

EXHIBIT "E"  
Multipoint Surface Use Plan

Attached to UDOGM Form 3  
Summit Operating, LLC  
**State 8-32-13-22**  
SE/4 NE/4, Sec. 32, T13S, R22E, SLB & M  
1978' F&L, 824' FEL  
Uintah County, Utah

**1. Existing Roads**

- a. The proposed access road will be Constructed consistent with the State of Utah and Summit Operating, LLC, and will encroach on Uintah County Road 4610. County Road 4610 is the main access into this area.
- b. Existing roads will be maintained in the same or better condition. See Exhibit "B".

**2. Planned Access**

Approximately 2300' of new access will be required (See Exhibit "B") Access is determined by acquired Right of way by the surface owner.

- a. Maximum Width: 24'
- b. Maximum grade: 10 %
- c. Turnouts: None
- d. Drainage design: 6 – 18" culverts may be required along the new portion of the road. Water will be diverted around the road as necessary and practical.
- e. If the well is productive, the road will be surfaced and maintained as necessary to prevent soil erosion and accommodate year-round traffic.
- f. Existing trees will be left in place where practical to provide screening and buffer areas.

### **3. Location of Existing Wells**

- a. See Exhibit "B", Drawing L-1. There is existing well locations within a one mile radius of the proposed location.

### **4. Location of Existing and/or Proposed Facilities**

- a. If the well is a producer, installation of production facilities will follow.
- b. Rehabilitation of all pad areas not used for production facilities will be made in accordance with landowner stipulations.

### **5. Location and Type of Water Supply**

- a. Water to be used for drilling will be obtained from Bitter Creek, Permit #T75377
- b. Water will be transported by truck over approved access roads.
- c. No water well is to be drilled for this location.

### **6. Source of Construction Materials**

- a. Any necessary construction materials needed will be obtained locally from a private source and hauled to the location on existing roads.
- b. No construction or surfacing materials will be taken from Federal/Indian land.

### **7. Methods for handling waste disposal**

- a. A reserve pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit. The pit will be lined with a synthetic liner. Three sides of the reserve pit will be fenced within 24 hours after completion of construction and the fourth side within 24 hours after drilling operations cease with four strands of barbed wire, or woven wire topped with barbed wire to a height of not less than four feet. The fence will be kept in good repair while the pit is drying.



- b. Following drilling, the liquid waste will be evaporated from the pit and the pit backfilled and returned to natural grade. No liquid hydrocarbons will be discharged to the reserve pit or location.
- c. In the event fluids are produced, any oil will be retained in tanks until sold and any water produced will be retained until its quality can be determined. The quality and quantity of the water will determine the method of disposal.
- d. Trash will be contained in a portable metal container and will be hauled from location periodically and disposed of at an approved disposal site. Chemical toilets will be placed on location and sewage will be disposed of at an appropriate disposal site.

#### **8. Ancillary Facilities**

- a. We anticipate no need for ancillary facilities with the exception of trailers to be located on the drill site.

#### **9. Well-site Layout**

- a. Available topsoil will be removed from the location and stockpiled. Location of the rig, reserve and blooie pits, and drilling support equipment will be located as shown on Attachment "C".
- b. A blooie pit will be located 100' from the drill hole. A line will be placed on the surface from the center hole to the blooie pit. The blooie pit will not be lined, but will be fenced on four sides to protect livestock/wildlife.
- c. Access to the well pad will be as shown on Exhibit "B".
- d. Natural runoff will be diverted around the well pad.

#### **10. Plans for Restoration of Surface**

- a. All surface areas not required for producing operations will be graded to as near original condition as possible and contoured to maintain possible erosion to a minimum.
- b. Available topsoil will be stockpiled and will be evenly distributed over the disturbed areas and the area will be reseeded as prescribed by the landowner.
- c. Pits and any other area that would present a hazard to wildlife or livestock will be fenced off when the rig is released and removed.

- d. Any oil accumulation on the pit will be removed or overhead flagged as dictated by then existed conditions.
- e. Rehabilitation will commence following completion of the well. Rat and mouse holes will be filled immediately upon release of the drilling rig from the location. If the well-site is to be abandoned, all disturbed areas will be recontoured to the natural contour as is possible.

#### **11. Surface Ownership**

- a. The well-site and access road will be constructed on lands owned by the School and Institutional Trust Lands Administration, 675 East 500 South, Salt Lake City, Utah 84102-2818; 801-538-5100. The operator shall contact the landowner and the Division of Oil, Gas and Mining 48 hours prior to beginning construction activities.

#### **12. Other Information:**

- a. The primary surface use is wildlife habitat and grazing. The nearest dwelling is approximately 3 miles West. Nearest live water is in Willow Creek, 3 miles West.
- b. If there is snow on the ground when construction begins, it will be removed before the soil is disturbed, and piled downhill from the topsoil stockpile location.
- c. The back-slope and fore-slope will be constructed no steeper than 3:1.
- d. All equipment and vehicles will be confined to the access road and well pad.
- e. A complete copy of the approved Application for Permit to Drill (APD) including conditions and stipulations shall be on the well-site during construction and drilling operations.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the Division of Oil, Gas & Mining.

13. **Company Representative**

David Lillywhite  
Summit Operating, LLC.  
2064 Prospector Avenue  
Suite 102  
Park City, Utah 84060  
1-435-940-9001

**Permitting Consultant**

Larry W. Johnson  
Talon Resources, Inc.  
195 North 100 West  
Huntington, UT. 84528  
1-435-687-5310

**Excavation Contractor**

Stubbs & Stubbs Oilfield Construction  
437 South 800 East  
Vernal, Utah 84078  
1-435-789-8874

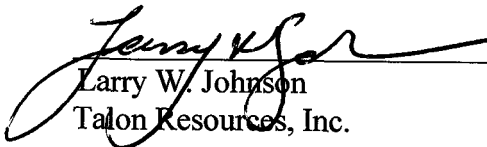
**Mail Approved A.P.D. To:**

Company Representative

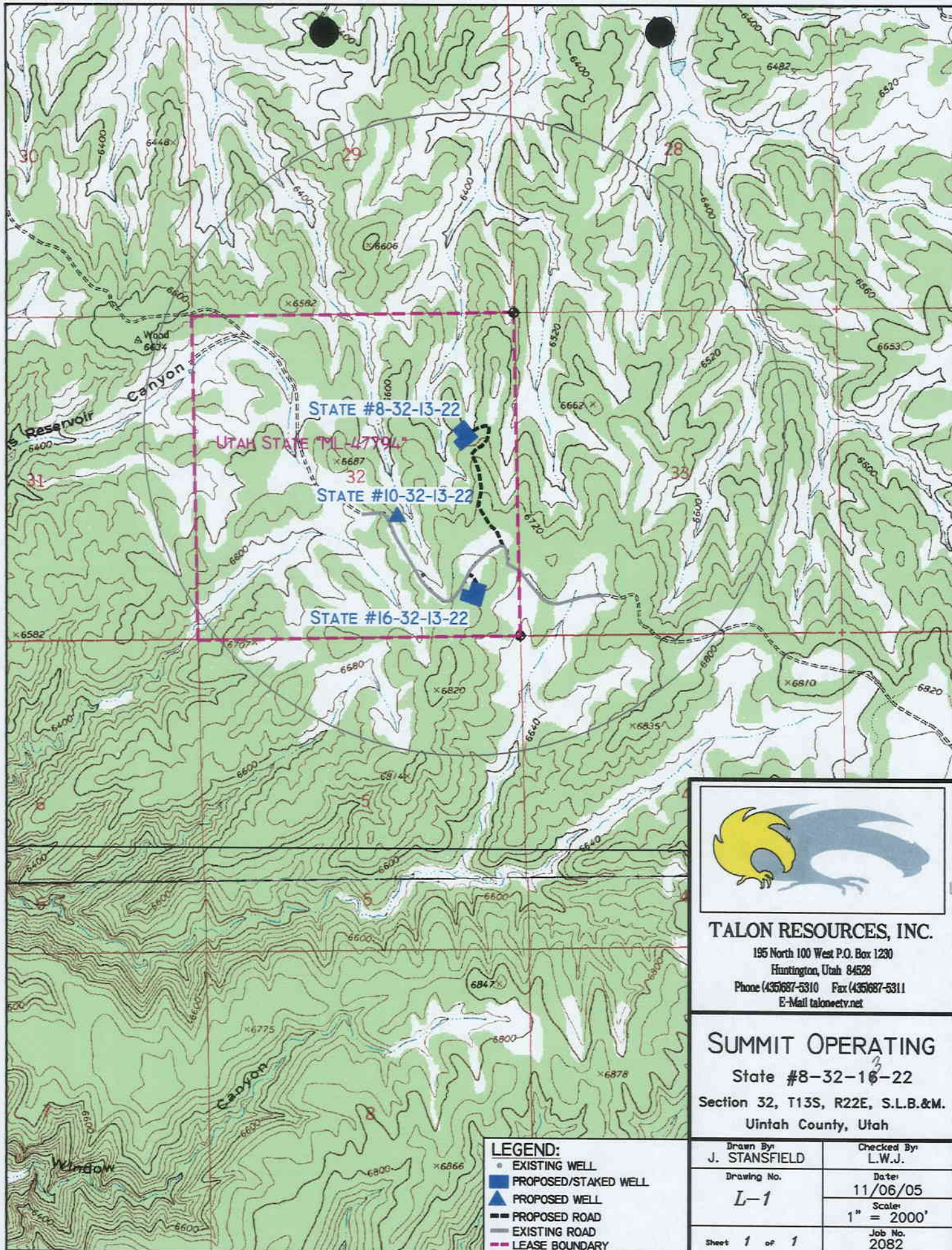
14. **Certification**

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by Summit Operating, LLC. and its subcontractors in conformity with this plan and the terms and conditions under which it is approved.

12/14/05  
Date

  
Larry W. Johnson  
Talon Resources, Inc.





**TALON RESOURCES, INC.**

195 North 100 West P.O. Box 1230  
Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talonnetv.net

**SUMMIT OPERATING**

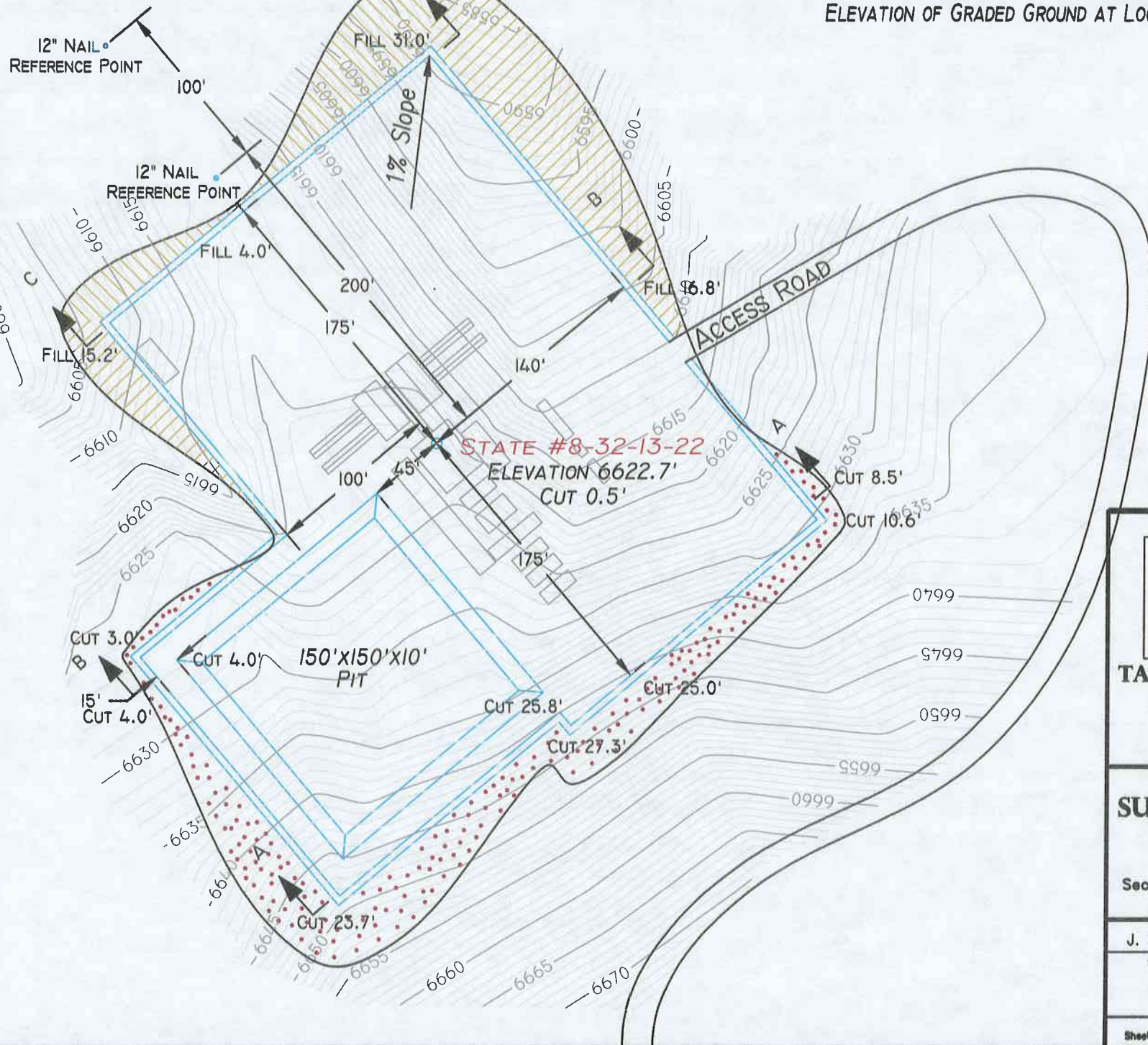
State #8-32-13-22  
Section 32, T13S, R22E, S.L.B.&M.  
Uintah County, Utah

- LEGEND:**
- EXISTING WELL
  - PROPOSED/STAKED WELL
  - ▲ PROPOSED WELL
  - PROPOSED ROAD
  - EXISTING ROAD
  - LEASE BOUNDARY

Drawn By: J. STANSFIELD	Checked By: L.W.J.
Drawing No. <b>L-1</b>	Date: 11/06/05
	Scale: 1" = 2000'
Sheet 1 of 1	Job No. 2082



ELEVATION OF UNGRADED GROUND AT LOCATION STAKE = 6622.7'  
 ELEVATION OF GRADED GROUND AT LOCATION STAKE = 6622.2'



**TALON RESOURCES, INC.**

195 North 100 West P.O. Box 1230  
 Huntington, Utah 84528

Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon@etv.net

**SUMMIT OPERATING**

**LOCATION LAYOUT**

Section 32, T13S, R22E, S.L.B.&M.  
**WELL #8-32-13-22**

Drawn By:  
**J. STANSFIELD**

Checked By:  
**L.W.J.**

Drawing No.

Date:  
**12/08/05**

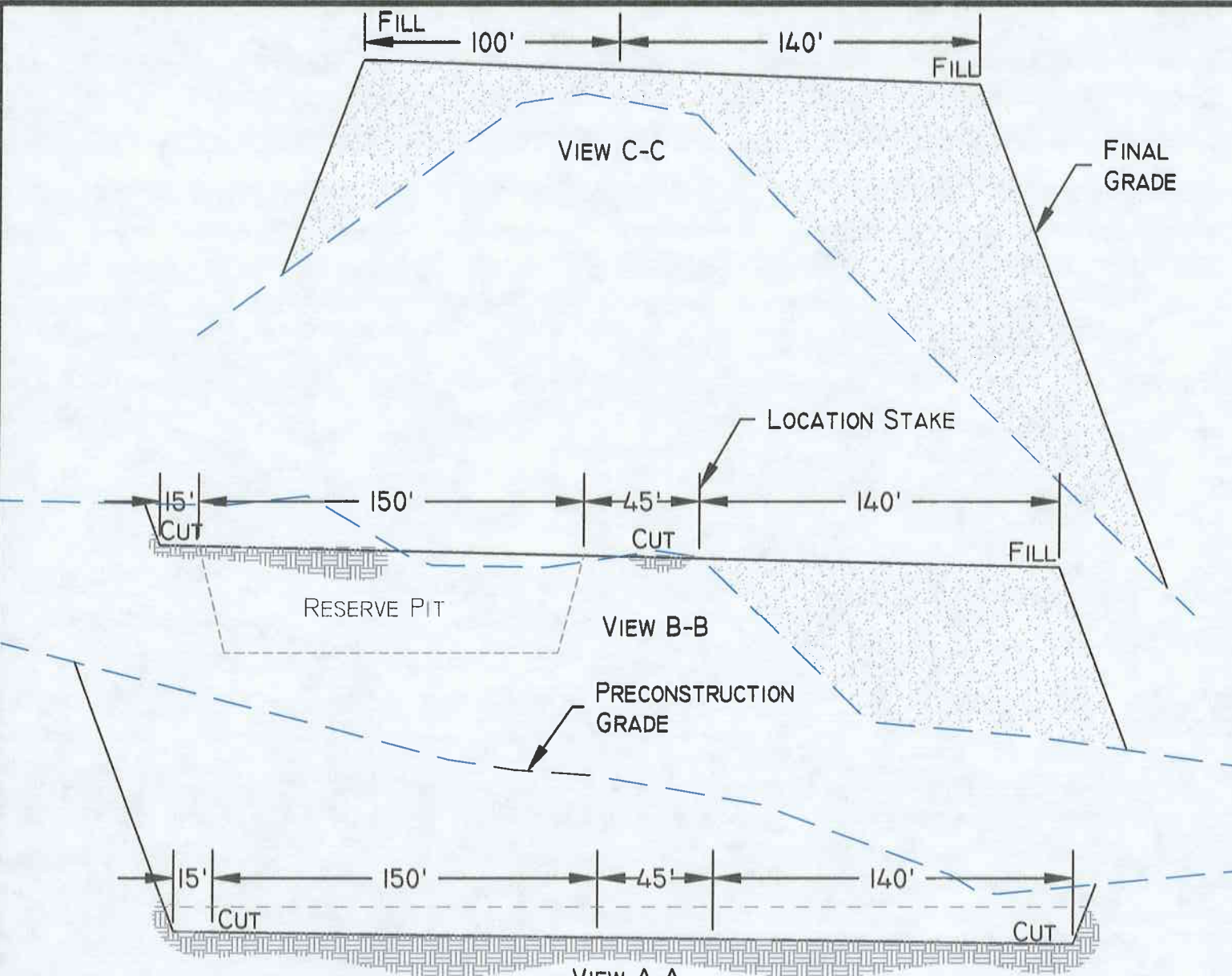
**A-2**

Scale:  
**1" = 50'**

Sheet **2** of **4**

Job No.  
**2084**





$1" = 10'$   
 X-Section  
 Scale  
 $1" = 40'$

SLOPE = 1 1/2 : 1  
 (EXCEPT PIT)  
 PIT SLOPE = 1 ; 1



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 Huntington, Utah 84528  
 Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon@etv.net

**SUMMIT OPERATING**

TYPICAL CROSS SECTION  
 Section 32, T13S, R22E, S.L.B.&M.  
 WELL #8-32-13-22

Drawn By: J. STANSFIELD	Checked By: L.W.J.
Drawing No. C-1	Date: 12/08/05
	Scale: 1" = 40'
Sheet 3 of 4	Job No. 2084

**APPROXIMATE YARDAGES**

**CUT**

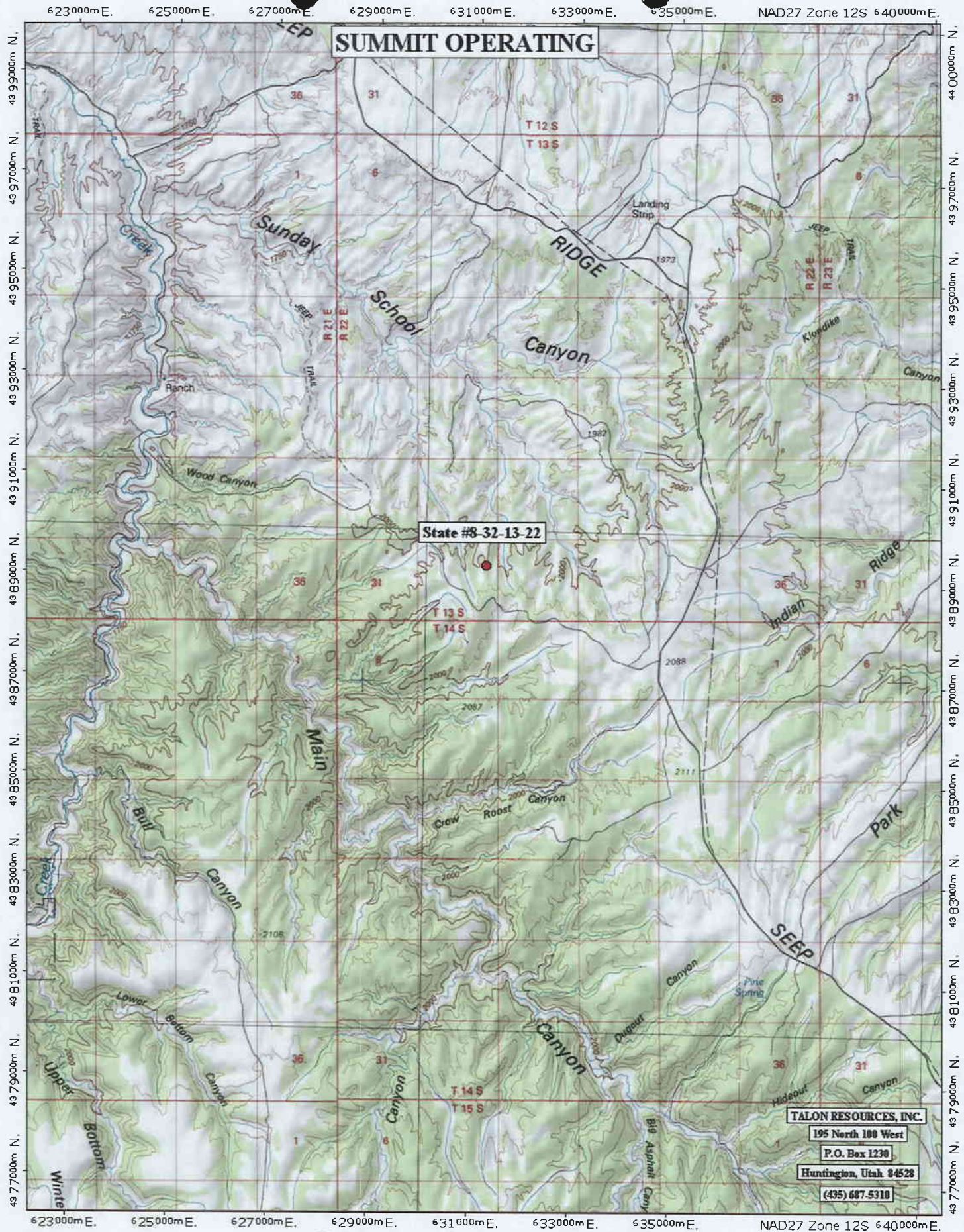
(6") TOPSOIL STRIPPING = 2,640 CU. YDS.

REMAINING LOCATION = 20,290 CU. YDS.

**TOTAL CUT = 28,455 CU. YDS.**

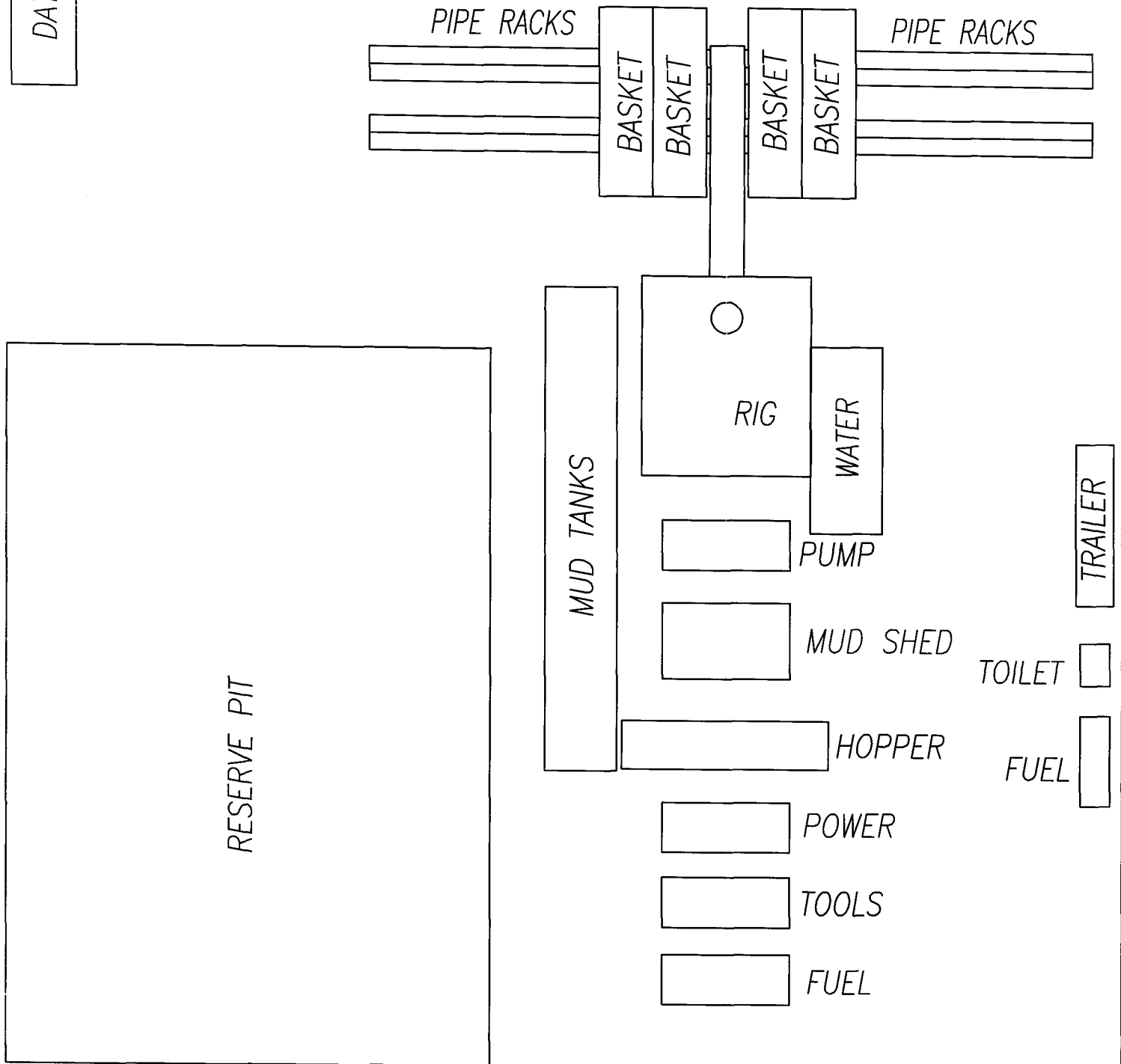
**TOTAL FILL = 26,290 CU. YDS.**





# Summit Operating

DATA



RIG & EQUIPMENT LAYOUT  
(Not to Scale)

STORAGE TANK

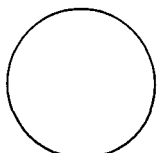
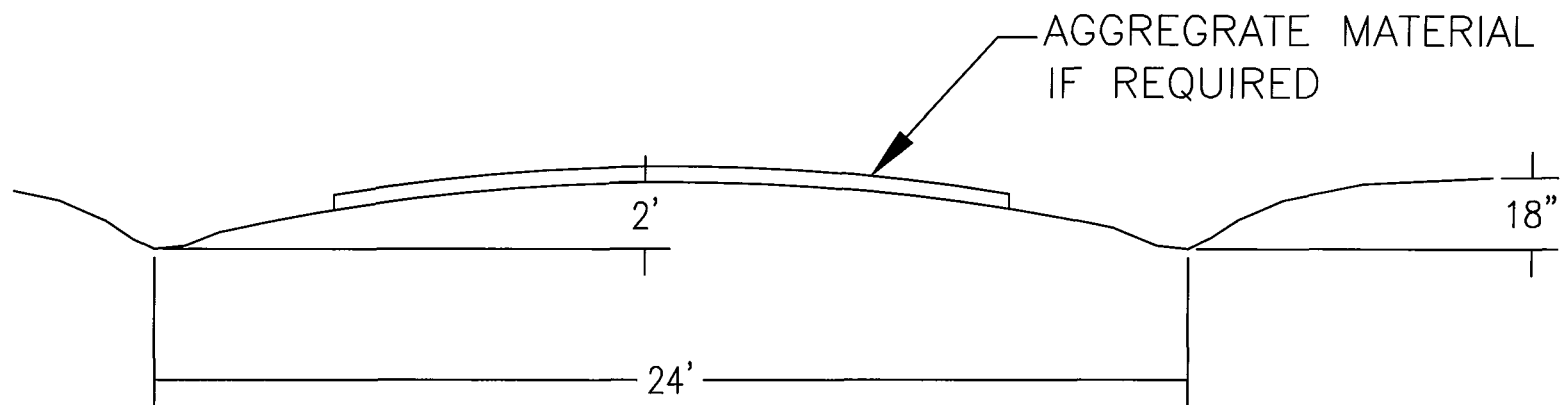


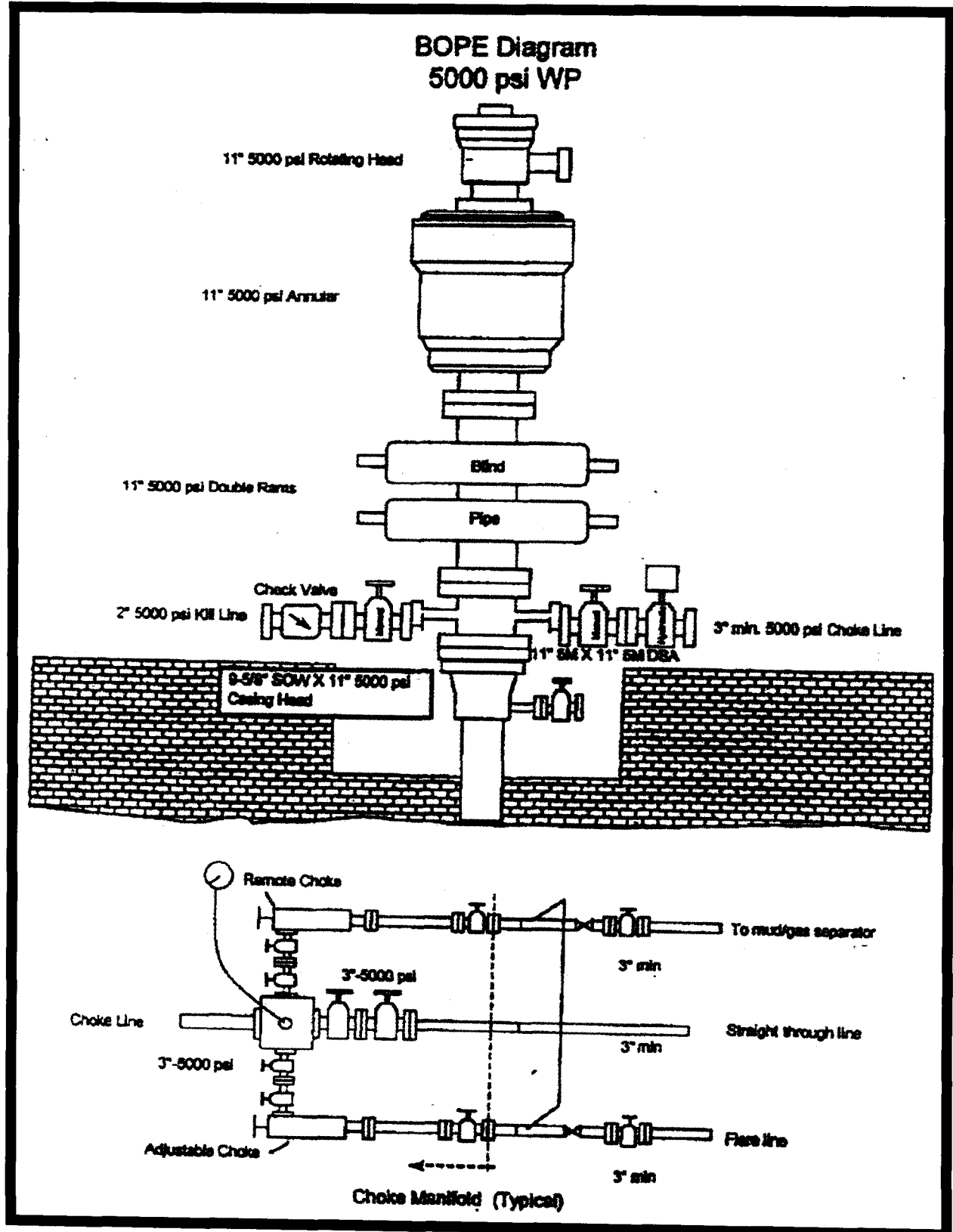
EXHIBIT "C"



# TYPICAL ROAD CROSS-SECTION



# Summit Operating



**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 12/15/2005

API NO. ASSIGNED: 43-047-37521

WELL NAME: STATE 8-32-13-22

OPERATOR: SUMMIT OPERATING LLC ( N2315 )

CONTACT: LARRY JOHNSON

PHONE NUMBER: 435-687-5310

**PROPOSED LOCATION:**

SENE 32 130S 220E

SURFACE: 1978 FNL 0824 FEL

BOTTOM: 1978 FNL 0824 FEL

UINTAH

WILDCAT ( 1 )

LEASE TYPE: 3 - State

LEASE NUMBER: ML-47794

SURFACE OWNER: 3 - State

PROPOSED FORMATION: MNKP

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DJD	1/23/06
Geology		
Surface		

LATITUDE: 39.64498

LONGITUDE: -109.4716

**RECEIVED AND/OR REVIEWED:**

☒ Plat  
☒ Bond: Fed[] Ind[] Sta[] Fee[]  
(No. 75B 800622)  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. T75377)  
☒ RDCC Review (Y/N)  
(Date: 01/04/2006)  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

**LOCATION AND SITING:**

☐ R649-2-3.  
Unit \_\_\_\_\_  
☒ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells  
☐ R649-3-3. Exception  
☐ Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_  
☐ R649-3-11. Directional Drill

COMMENTS:

Needs Permit (01-09-06)

STIPULATIONS:

1- Spacing Strip  
2- STATEMENT OF BASIS

T13S R22E

30

29

28

31

32

33

STATE 8-32-13-22

STATE 16-32-13-22

T14S R22E

6

5

4

## PINE SPRINGS FIELD

OPERATOR: SUMMIT OPER LLC (N2315)

SEC: 32 T. 13S R. 22E

FIELD: WILDCAT (001)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

### Field Status

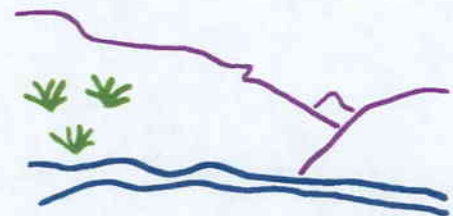
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

### Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

### Wells Status

- x GAS INJECTION
- x GAS STORAGE
- x LOCATION ABANDONED
- o NEW LOCATION
- x PLUGGED & ABANDONED
- x PRODUCING GAS
- o PRODUCING OIL
- x SHUT-IN GAS
- o SHUT-IN OIL
- x TEMP. ABANDONED
- o TEST WELL
- o WATER INJECTION
- o WATER SUPPLY
- o WATER DISPOSAL
- o DRILLING



*Utah Oil Gas and Mining*



PREPARED BY: DIANA WHITNEY  
DATE: 20-DECEMBER-2005

**DIVISION OF OIL, GAS AND MINING**  
**APPLICATION FOR PERMIT TO DRILL**  
**STATEMENT OF BASIS**

**OPERATOR:** Summit Operating, LLC  
**WELL NAME & NUMBER:** State 8-32-13-22  
**API NUMBER:** 43-047-37521  
**LOCATION:** 1/4, 1/4 SE/NE Sec:32 TWP: 13S RNG: 22 E 1978 FNL 824' FEL

**Geology/Ground Water:**

Summit proposes setting 2,000 feet of surface casing cemented to surface. The Base of the moderately saline ground water is estimated to be at a depth of 4,100 feet. A search of Division of Water Rights records indicates that there are no water wells within a 10,000' radius of the center of Section 32. The surface formation at the proposed location is the Green River Formation. The Green River Formation can be a significant aquifer and should be protected. The proposed casing and cement program should adequately protect useable ground water.

**Reviewer:** Brad Hill **Date:** 01-17-06

**Surface:**

At the request of Summit Resources LLC, a pre-site for this well was completed on 1/09/2006. The State of Utah (SITLA) owns both the surface and minerals. Mr. Larry Johnson, of Talon Consulting representing Summit Resources LLC, was contacted by phone on 1/3/2006 and informed of and invited to participate in the presite. He suggested the date set. Mr. Ben Williams of the Utah Division of Wildlife Resources and Mr. Jim Davis from SITLA were both contacted by telephone and e-mail and both attended.

Ben Williams, representing the UDWR, stated this area is also classified as critical value winter habitat for both deer and elk. He explained how the areas are classified. Mr. Williams recommended to Mr. Johnson, Mr. Davis and Mr. Stubbs that they limit their activity from Nov. 15 thru April 15 to protect wintering values for these species. This activity would include road and pad construction, drilling and work-over rigs. Mr. Williams gave Mr. Johnson and Mr. Davis a written summary of his observations and a recommended seed mix for stabilizing the area. I explained to Mr. Johnson that the seasonal restriction were recommendation from DWR and would not be a condition of the permit that DOGM would issue. Mr. Johnson said he would include this information in his report to Summit Operating.

The area poses no surface problems for drilling a well.

**Reviewer:** Floyd Bartlett **Date:** 01/09/2006

**Conditions of Approval/Application for Permit to Drill:**

1. A synthetic liner with a minimum thickness of 12 mils with a felt sub-liner shall be properly installed and maintained in the reserve pit.
2. An archeological survey needs to be completed and submitted.

**ON-SITE PREDRILL EVALUATION**  
**Division of Oil, Gas and Mining**

**OPERATOR:** Summit Operating, LLC  
**WELL NAME & NUMBER:** State 8-32-13-22  
**API NUMBER:** 43-047-37521  
**LEASE:** ML-47794 **FIELD/UNIT:** Undesignated  
**LOCATION:** 1/4, 1/4 SE/NE **Sec:** 32 **TWP:** 13S **RNG:** 22 E 1978 **FNL** 824' **FEL**  
**LEGAL WELL SITING:** 460 F **SEC. LINE;** 460 F 1/4, 1/4 **LINE;** 460 F **ANOTHER WELL.**  
**GPS COORD (UTM):** 4389261 Y 0631146 X **SURFACE OWNER:** STATE (SITLA)

**PARTICIPANTS**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Larry Johnson, (Talon Resources-Permit Consultant), Jared Lofthouse (Surveyor, Talon Resources), David Taylor (Surveyor, Talon Resources), Cory Stubbs (Stubbs and Stubbs Construction), Ben Williams (Utah Division of Wildlife Resources)

**REGIONAL/SETTING TOPOGRAPHY**

Site is in Uintah County, Utah in the head of tributary of Main Canyon of the Willow Creek Drainage, and approximately 2 3/4 miles west of the Seep Ridge Uintah County Road. Ouray, Utah is approximately 44 miles to the north. The Willow Creek drainage lies to the west and the Bitter Creek drainage is to the east. The general topography is characterized by open broad to narrow ridges or plateaus intersected by numerous draws or canyons, which often become steep. Drainage is generally southwesterly toward Willow Creek, which contains a perennial stream. All drainages in the immediate area are ephemeral.

Access to the site from Ouray, UT is following the Seep Ridge Road south approximately 44 miles, then west on the Wood Canyon approximately two miles then northerly 2300 feet on a road to be constructed to the proposed location. (See Drawing L-1 of the APD).

The well pad location is on a ridge top in moderately steep topography, that slopes slightly to the northeast. It is within a pinion/juniper stand which leads north into a open narrow sage covered draw.

**SURFACE USE PLAN**

CURRENT SURFACE USE: Summer and winter cattle grazing, small and big game hunting and general recreation.

PROPOSED SURFACE DISTURBANCE: Location of 350' x 335' which includes a reserve pit of 150' x 150' and a 15' wide bench. Approximately 2300 feet of new road will be constructed partially following a 2-track road from the existing Wood Canyon Uintah County road. A pipeline will be laid adjacent to the road.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: There are no existing wells within 1 mile radius. This operator within this radius currently plans two other wells.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: All production facilities will be on location and added after drilling well. Pipeline will follow access road.

SOURCE OF CONSTRUCTION MATERIAL: All construction material will be obtained from the site.

ANCILLARY FACILITIES: None will be required.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST CONCERNS? (EXPLAIN). Probably not as there is oil field activity in the general area.

#### **WASTE MANAGEMENT PLAN:**

Drilled cuttings will be settled into reserve pit. Liquids from pit will be allowed to evaporate. Formation water will be confined to storage tanks. Commercial contractor will handle sewage facilities, storage and disposal. Trash will be contained in trash baskets and hauled to an approved land fill.

#### **ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: None.

FLORA/FAUNA: Vegetated with pinion/juniper. Little or no understory vegetation exists. The draw to the north contains big sagebrush and 4-winged salt brush. Fauna consists of deer, elk, mountain lion, coyote and other small mammals and birds. Some raptors also occur in the general area.

SOIL TYPE AND CHARACTERISTICS: Deep light brown sandy loam with shaley surface rock.

EROSION/SEDIMENTATION/STABILITY: Very little natural erosion. No significant drainages intercept the proposed location. Sedimentation and stability are not a problem and location construction shouldn't cause an increase in stability or erosion problems.

PALEONTOLOGICAL POTENTIAL: None observed.

#### **RESERVE PIT**

CHARACTERISTICS: 150' x 150' x 10' deep, located in an area of cut on the southwest corner of the location. A 15' wide bench is planned around the outer edges. Two feet of freeboard is provided.

LINER REQUIREMENTS (Site Ranking Form attached): Level I sensitivity. A pit liner with a sub liner is required for the reserve pit.

## SURFACE RESTORATION/RECLAMATION PLAN

As per Land Owner Agreement.

### **SURFACE AGREEMENT:**

A surface agreement has been executed and is on file.

**ARCULTURAL RESOURCES/ARCHAEOLOGY:** An archaeological survey has not yet been completed.

### **OTHER OBSERVATIONS/COMMENTS**

Ben Williams, representing the UDWR, stated this area is classified as critical value winter habitat for both deer and elk. He explained how the areas are classified. He recommended to Mr. Johnson, Mr. Davis and Mr. Stubbs that they limit their activity from Nov. 15 thru April 15 to protect wintering values for these species. This activity would include road and pad construction, drilling and work-over rigs. Mr. Williams gave Mr. Johnson and Mr. Davis a written summary of his observations and a recommended seed mix for stabilizing the area. I explained to Mr. Johnson that the seasonal restriction were recommendation from DWR and would not be a condition of the permit that DOGM would issue. Mr. Johnson said he would include this information in his report to Summit Operating.

### **ATTACHMENTS**

Photos of this site were taken and placed on file.

FLOYD BARTLETT  
DOGM REPRESENTATIVE

January 9, 2006; 12:00 NOON

DATE/TIME



**Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements**

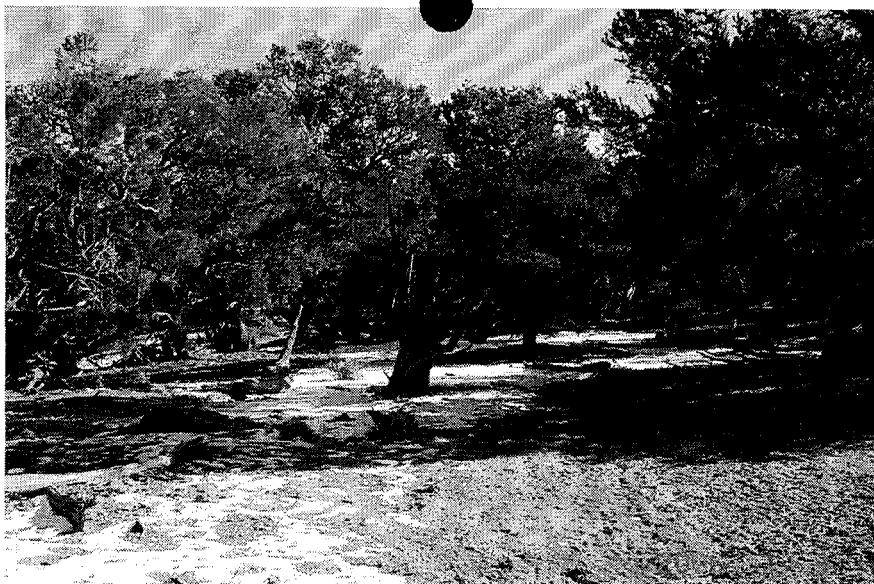
<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>0</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	<u>0</u>
< 100	20	
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>10</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>5</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>0</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>0</u>

**Final Score**      25      (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.


Sensitivity Level I = 15-19; lining is discretionary.

Sensitivity Level II = below 15; no specific lining is required.





**STATE ACTIONS**  
**Resource Development Coordinating Committee**  
**Governor's Office of Planning and Budget**  
**5110 State Office Building**  
**SLC, UT 84114**  
**Phone No. 537-9230**

<b>1. State Agency</b> Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	<b>2. Approximate date project will start:</b>  Upon Approval or January 3, 2006
<b>3. Title of proposed action:</b> Application for Permit to Drill	
<b>4. Description of Project:</b>  Summit Operating LLC proposes to drill the State 8-32-13-22 well (wildcat) on a State lease ML-47794, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
<b>5. Location and detailed map of land affected (site location map required, electronic GIS map preferred)</b> (include UTM coordinates where possible) (indicate county) 1978' FNL 824' FEL, SE/4 NE/4, Section 32, Township 13 South, Range 22 East, Uintah County, Utah	
<b>6. Possible significant impacts likely to occur:</b> Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
<b>7. Identify local government affected</b> a. Has the government been contacted? No. b. When? c. What was the response? d. If no response, how is the local government(s) likely to be impacted?	
<b>8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable:</b> a. Has the representative and senator been contacted? N/A	
<b>9. Areawide clearinghouse(s) receiving state action:</b> (to be sent out by agency in block 1) Uintah Basin Association of Governments	
<b>10. For further information, contact:</b>    Diana Whitney Phone: (801) 538-5312	<b>11. Signature and title of authorized officer</b>   Gil Hunt, Associate Director Date: December 20, 2005

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47794</b>		6. SURFACE: <b>State</b>	
1A. TYPE OF WORK: <b>DRILL</b> <input checked="" type="checkbox"/> <b>REENTER</b> <input type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>N/A</b>			
B. TYPE OF WELL: <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input checked="" type="checkbox"/> <b>OTHER</b> _____ <b>SINGLE ZONE</b> <input type="checkbox"/> <b>MULTIPLE ZONE</b> <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: <b>N/A</b>			
2. NAME OF OPERATOR: <b>Summit Operating, LLC</b>				9. WELL NAME and NUMBER: <b>State 8-32-13-22</b>			
3. ADDRESS OF OPERATOR: <b>2064 Prospector Ave 102</b> CITY <b>Park City</b> STATE <b>UT</b> ZIP <b>84060</b>				PHONE NUMBER: <b>(435) 940-9001</b>			
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: <b>1978' FNL, 824' FEL</b> AT PROPOSED PRODUCING ZONE: <b>1978' FNL, 824' FEL</b>				10. FIELD AND POOL, OR WILDCAT: <b>Seep Ridge Wildcat</b>			
				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SENE 32 13S 22E S</b>			
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>44 miles south of Ouray, Utah</b>				12. COUNTY: <b>Uintah</b>		13. STATE: <b>UTAH</b>	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>824'</b>		16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>			
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>See attached map</b>		19. PROPOSED DEPTH: <b>11,650</b>		20. BOND DESCRIPTION: <b>N2315</b>			
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6623' GR</b>		22. APPROXIMATE DATE WORK WILL START: <b>2/1/2006</b>		23. ESTIMATED DURATION: <b>28 Days</b>			

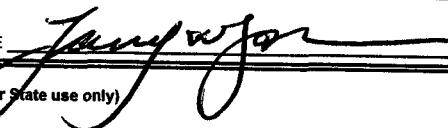
24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
12-3/4"	9-5/8"	J-55 LT&C	36#	2,000	HHF	350 Sacks	3.2 cu ft/sk 11.6 ppg
					Premium	200 sacks	1.17 cu ft/sk 15.8 ppg
7-7/8"	5-1/2"	N-80 LT&C	17#	11,650	Super flush/water		9.2 3.33 ppg
					50/50 Poz Premium AG	450 sacks	1.49 cu ft/sk 13.5 ppg
					Hi Fill Mod	415 sacks	3.85 cu ft/sk 11.0 ppg
					Premium AG	50 sacks	1.15 cu ft/sk 15.0 ppg

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Larry W. Johnson TITLE Agent for Summit Operating, LLC

SIGNATURE  DATE 12/14/05

(This space for State use only)

API NUMBER ASSIGNED: 43-042-37521

APPROVAL:

**RECEIVED**  
**DEC 15 2005**  
**DIV. OF OIL, GAS & MINING**

# Range 22 East

(S89°59'W - 5281.32')

## Location:

The well location was determined using a Trimble 5700 GPS survey grade unit.

## Basis of Bearing:

The Basis of Bearing is GPS Measured.

## GLO Bearing:

The Bearings indicated are per the recorded plat obtained from the U.S. Land Office.

## Basis of Elevation:

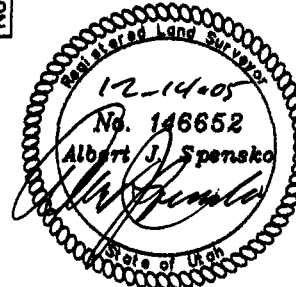
Basis of Elevation of 6849.0' being at the West Quarter Corner of Section 2, Township 14 South, Range 22 East, Salt Lake Base & Meridian, as shown on the Bates Knolls Quadrangle 7.5 Minute Series Map.

## Description of Location:

Proposed Drill Hole located in the SE1/4 NE1/4 of Section 32, T13S, R22E, S.L.B.&M., being 1978.38' South and 824.47' West from the Northeast Corner of Section 32, T13S, R22E, Salt Lake Base & Meridian.

## Surveyor's Certificate:

I, Albert J. Spensko, a Registered Professional Land Surveyor, holding Certificate 146652 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my personal direction and supervision as shown hereon.



GRAPHIC SCALE

0 500' 1000'

( IN FEET )

1 inch = 1000 ft.

## NOTES:

1. UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 Datum.

LAT / LONG  
39°38'42.038" N  
109°28'15.082" W

## Legend

- Drill Hole Location
- ⊙ Brass Cap (Found)
- Brass Cap (Searched for, but not found)
- △ Rock Pile
- ( ) GLO
- GPS Measured

Township 13 South

(N00°03'W)

32

STATE #8-32-13-22  
ELEV. 6622.7'

UTM  
N 4389266  
E 631207

(N00°03'W)  
N00°01'17"W - 5277.81'



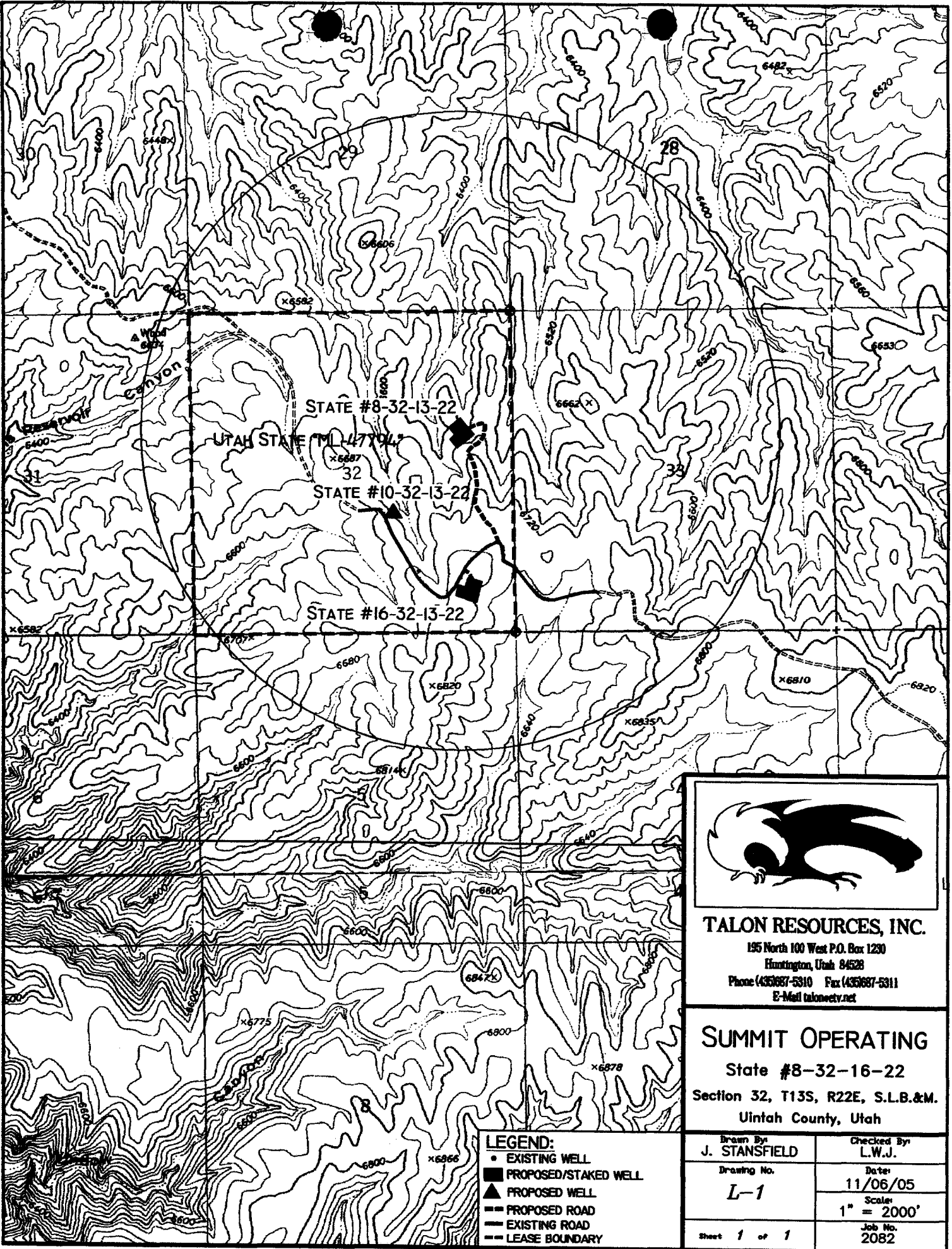
TALON RESOURCES, INC.

195 North 100 West P.O. Box 1230  
Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talonnetv.net

## SUMMIT OPERATING

State #8-32-13-22  
Section 32, T13S, R22E, S.L.B.&M.  
Uintah County, Utah

Drawn By J. STANSFIELD	Checked By L.W.J./J.S.H.
Drawing No. A-1	Date 11/09/05
	Scale 1" = 1000'
Sheet 1 of 1	Job No. 2084



**TALON RESOURCES, INC.**  
195 North 100 West P.O. Box 1230  
Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talonenvy.net

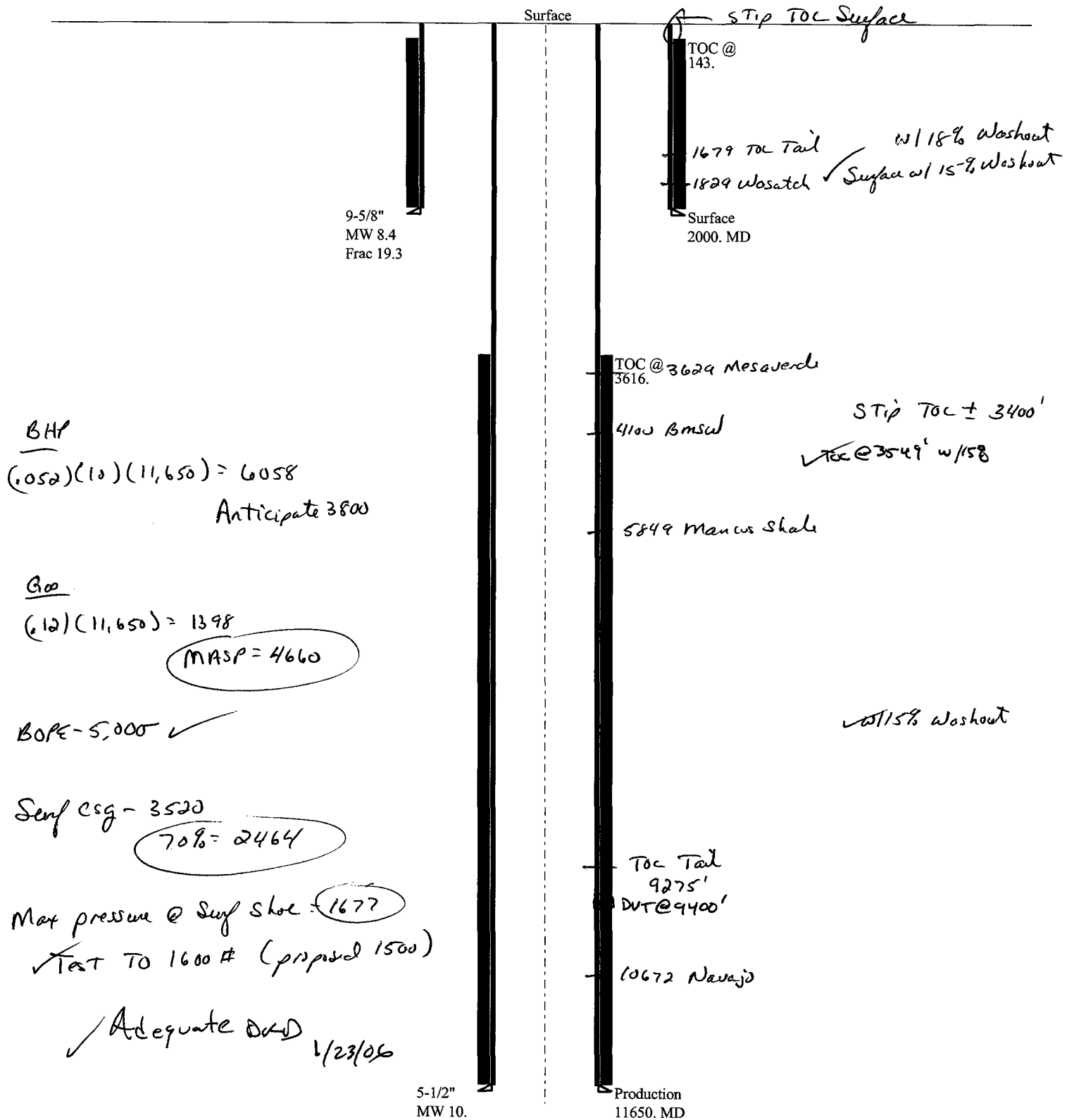
**SUMMIT OPERATING**  
State #8-32-16-22  
Section 32, T13S, R22E, S.L.B.&M.  
Uintah County, Utah

**LEGEND:**  
• EXISTING WELL  
■ PROPOSED/STAKED WELL  
▲ PROPOSED WELL  
--- PROPOSED ROAD  
--- EXISTING ROAD  
--- LEASE BOUNDARY

Drawn By J. STANSFIELD	Checked By L.W.J.
Drawing No. L-1	Date 11/06/05
	Scale 1" = 2000'
Sheet 1 of 1	Job No. 2082

01-06 Summit State 8-32-15-22

Casing Schematic





Well name:	<b>01-06 Summit State 8-32-13-22</b>	
Operator:	<b>Summit Exploration Company</b>	
String type:	Surface	Project ID: 43-047-37521
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 93 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 250 ft

Cement top: 143 ft

**Burst**

Max anticipated surface pressure: 1,760 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,000 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on buoyed weight.  
Neutral point: 1,751 ft

Non-directional string.

**Re subsequent strings:**

Next setting depth: 11,650 ft  
Next mud weight: 10.000 ppg  
Next setting BHP: 6,052 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,000 ft  
Injection pressure 2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	9.625	36.00	J-55	LT&C	2000	2000	8.796	142.4
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	2020	2.315	2000	3520	1.76	63	453	7.19 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: 801-538-5280  
FAX: 810-359-3940

Date: January 18, 2006  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>01-06 Summit State 8-32-13-22</b>	
Operator:	<b>Summit Exploration Company</b>	
String type:	Production	Project ID: 43-047-37521
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 228 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,500 ft

Cement top: 3,616 ft

**Burst**

Max anticipated surface pressure: 4,654 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 6,052 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.  
Neutral point: 9,883 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	11650	5.5	17.00	N-80	LT&C	11650	11650	4.767	401.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6052	6290	1.039	6052	7740	1.28	168	348	2.07 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: 801-538-5280  
FAX: 810-359-3940

Date: January 18, 2006  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 11650 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Project Number: 6050 Sponsor: Division of Oil, Gas and Mining  
SLB&M: Sec. 32, T13S, R22E Counties Affected: Uintah  
Description: Application for Permit to Drill - proposal to drill a wildcat well, the State 8-32-13-22 on a State lease ML-47794

Comments:

Well must be sited, drilled, and managed to prevent degradation of water quality through measures to limit erosion, limit stormwater runoff, and limit pollutant loading to runoff.

- 1- Wellpad placement or expansion disturbs soils. Vegetative and/or structural measures to control erosion should be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS. Such erosion control shall be maintained for the duration of the lease and shall remain in functional operation when the lease or permit is terminated.
- 2- If vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices should be implemented within those 60 days to control erosion. Such engineering measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate.
- 3- No disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas should be permitted outside of the area defined in the permit.
- 4- No spills nor runoff of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials should be permitted.
- 5- Before wellpad use is discontinued, permit holder shall restore the site to prevent stormwater runoff from exceeding water quality standards. Erosion from the site shall not exceed the tolerable rate as established by the local office of USDA / NRCS either while the wellpad site is in use, or when it is no longer in active use. No petrochemicals, salt, pesticides, nor other introduced potential pollutants shall be left such that they might be eroded, dissolved, blown, or otherwise carried away to become potential pollutant loads.

# TALON RESOURCES INC

December 14, 2005

Mrs. Diana Whitney  
State of Utah  
Division of Oil Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Application for Permit to Drill—  
State 8-32-13-22, Uintah County, Utah: Section 32, T13S, R22E, SLB&M  
State 16-32-13-22, Uintah County, Utah: Section 32, T13S, R22E, SLB&M  
State 4-36-13-22, Uintah County, Utah: Section 36, T13S, R22E, SLB&M  
State 6-36-13-22, Uintah County, Utah: Section 36, T13S, R22E, SLB&M

Dear Mrs. Whitney:

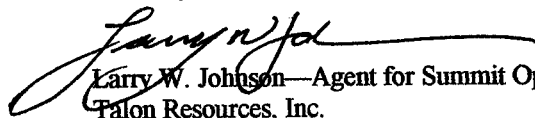
On behalf of Summit Operating, LLC (Summit), Talon Resources, Inc. respectfully submits the enclosed original of the *Application for Permit to Drill (APD)* for the above referenced wells. Included with the APD is the following supplemental information:

- Exhibit "A" - Survey plats and layouts of the proposed well site;
- Exhibit "B" - Proposed location maps with utility corridors;
- Exhibit "C" - Drilling site layout;
- Exhibit "D" - Drilling Program;
- Exhibit "E" - Multi Point Surface Use Plan;
- Exhibit "F" - Typical road cross-section;
- Exhibit "G" - Typical BOP diagram & wellhead manifold diagram.

Please accept this letter as Summit's written request for confidential treatment of all information contained in and pertaining to this application, if said information is eligible for such consideration.

Thank you very much for your timely consideration of this application. Please feel free to contact myself, or Mr. David Allin at 970-254-3114 if you have any questions or need additional information.

Sincerely,

  
Larry W. Johnson—Agent for Summit Operating  
Talon Resources, Inc.

cc: Mr. Floyd Bartlett, DOGM  
Mr. Ed Bonner, SITLA  
Mr. David Lillywhite, Summit Operating  
Mr. David Allin, Consultant

RECEIVED

DEC 15 2005

DIV. OF OIL, GAS & MINING

**From:** Robert Clark  
**To:** Whitney, Diana  
**Date:** 12/27/2005 10:04:40 AM  
**Subject:** RDCC short turn around responses

*Summit  
43-047-37521*

The following comments are submitted directly to DOG&M due to their short turn around status.

The following comments are submitted for **RDCC #6049-6050**. The comments pertain to both projects.

**Comments begin:** The proposed well drilling project in Uintah County may require a permit, known as an Approval Order, from the Utah Division of Air Quality. If any compressor stations are constructed at the site, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, SLC, UT, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The proposed project is also subject to Utah Air Quality Rule R307-205-3, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Division of Air Quality, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end.**

Robert Clark  
Division of Air Quality  
536-4435

**CC:** Mcneill, Dave; Wright, Carolyn

**From:** Ed Bonner  
**To:** Whitney, Diana  
**Date:** 2/15/2006 3:57:43 PM  
**Subject:** Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

EOG Resources, Inc  
NBU 556-18E  
NBU 557-18E

Summit Operating, LLC  
State 16-32-13-22  
State 8-32-13-22  
State 6-36-13-22  
State 4-36-13-22

Westport Oil & Gas Company  
NBU 1021-28G  
NBU 1021-28O (APD has name as **State 1021-28O**) One significant site which must be avoided  
NBU 1021-13A  
NBU 1021-13C  
NBU 1021-13G  
NBU 1021-13I  
NBU 1021-13K  
NBU 1021-13O

Wind River II Corporation  
Snowshoe 2-15-16-22

If you have any questions regarding this matter please give me a call.

**CC:** Garrison, LaVonne; Hill, Brad; Hunt, Gil



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

February 16, 2006

Summit Operating, LLC  
2064 Prospector Ave., Suite 102  
Park City, UT 84060

Re: State 8-32-13-22 Well, 1978' FNL, 824' FEL, SE NE, Sec. 32, T. 13 South,  
R. 22 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37521.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
SITLA

**Operator:** Summit Operating, LLC  
**Well Name & Number** State 8-32-13-22  
**API Number:** 43-047-37521  
**Lease:** ML-47794

**Location:** SE NE                      **Sec.** 32                      **T.** 13 South                      **R.** 22 East

### **Conditions of Approval**

**1. General**

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**2. Notification Requirements**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

**3. Reporting Requirements**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.**

**5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)**



6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
7. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:**                      43-047-37521  
**Well Name:** State 8-32-13-22  
**Location:** SENE Section 32, T13S, R22E, SLM, Uintah County, Utah  
**Company Permit Issued to:** Summit Operating, LLC  
**Date Original Permit Issued:** February 27, 2006  
16

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐ Not Applicable

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐



Signature

February 27, 2007

Date

Title: Agent for Summit Operating, LLC

Representing: Summit Operating, LLC

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Approved Gas Well APD</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47794
2. NAME OF OPERATOR: Summit Operating, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 2064 Prospector Ave, #102, Park City, STATE UT ZIP 84060		7. UNIT or CA AGREEMENT NAME: N/A
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1978' FNL, 824' FEL QTR/QTTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE, Section 32, T13S, R 22E, SLM		8. WELL NAME and NUMBER: State 8-32-13-22
		9. API NUMBER: 43-047-37521
		10. FIELD AND POOL, OR WILDCAT: Seep Ridge
		COUNTY: Uintah
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>May, 2007</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Request extension of APD term</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Summit Operating, LLC requests that this APD be extended for one more year. Construction of this location and well will occur later this year. Some amendments to the site engineering may be required depending upon the final selection of the primary rotary drilling contractor.

See the Application for Permit to Drill Request for Permit Extension Validation form attached.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 02-28-07  
By: [Signature]

COPY SENT TO OPERATOR  
Date: 2-28-07  
Initials: RAM

NAME (PLEASE PRINT) <u>David L. Allin</u>	TITLE <u>Agent for Summit Operating, LLC</u>
SIGNATURE <u>[Signature]</u>	DATE <u>February 27, 2007</u>

(This space for State use only)

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47794
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Approved gas well APD</u>		7. UNIT or CA AGREEMENT NAME: N/A
2. NAME OF OPERATOR: Summit Operating, LLC		8. WELL NAME and NUMBER: State 8-32-13-22
3. ADDRESS OF OPERATOR: 2064 Prospector Ave #102 Park City STATE UT ZIP 84060		9. API NUMBER: 43-047-37521
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1978' FNL, 824' FEL moved to 1838' FNL, 476' FEL (see below)		10. FIELD AND POOL, OR WILDCAT: Seep Ridge
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE, Section 32, T13S, R 22E, SLM		COUNTY: Uintah STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: <u>April 30, 2007</u>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: <u>Move location and begin construction</u>
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

A field inspection was conducted April 13, 2007 by the Summit Operating, LLC field supervisor and a surveyor from Summit's current location construction design engineers, Uintah Engineering & Land Surveying. They found that an adjusted location would require building less access road, disturb less overall area and involve cutting and filling substantially less rock and still intersect the seismic targets to be tested. Summit Operating, LLC herewith requests approval to adjust the location within the standard 40 acre tract drilling window and acceptance of the proposed design for the location that will better accommodate the rotary tools under consideration for drilling the long string hole.

The newly proposed footages for the well will be 1838' FNL, 476' FEL, SENE Section 32, T13S, R22E, SLM.

631251 X 43893054 Y 39.645355 - 109.470334

Plats depicting the new location and engineering design are attached.

Construction of the location is scheduled to begin as soon as possible upon approval by Utah DOGM.

NAME (PLEASE PRINT) <u>David L. Allin (970-254-3114)</u>	TITLE <u>Agent for Summit Operating, LLC</u>
SIGNATURE <u>[Signature]</u>	DATE <u>April 26, 2007</u>

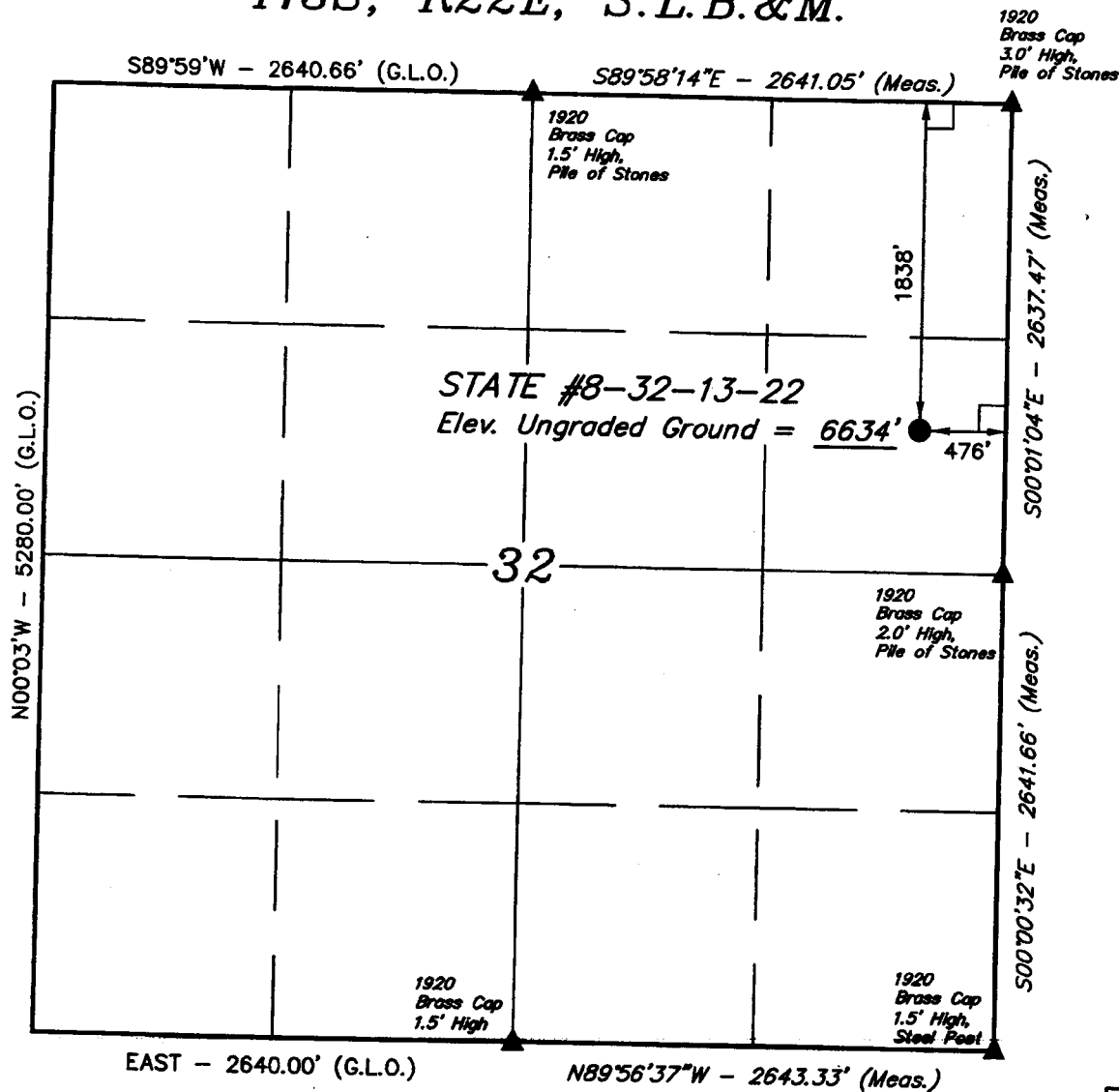
(This space for State use only)

COPY SENT TO OPERATOR  
Date: 4-27-07  
Initials: RM

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 04-26-07  
By: [Signature]

T13S, R22E, S.L.B.&M.

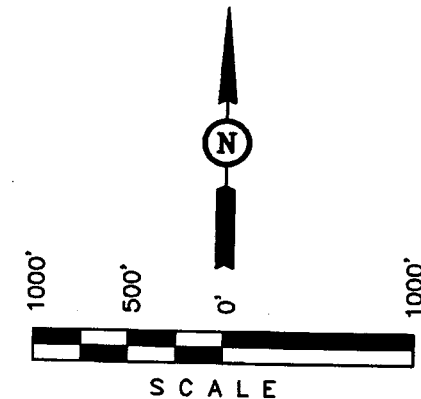


SUMMIT OPERATING, LLC

Well location, STATE #8-32-13-22, located as shown in the SE 1/4 NE 1/4 of Section 32, T13S, R22E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

SPOT ELEVATION AT A ROAD INTERSECTION IN THE NE 1/4 OF SECTION 26, T13S, R22E, S.L.B.&M. TAKEN FROM THE BATES KNOLLS QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6590 FEET.



### CERTIFICATION

THIS IS TO CERTIFY THAT THE PLAT WAS MADE FROM FIELD NOTES OF ACTUAL SURVEY MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ROBERT L. [Signature]  
REGISTERED LAND SURVEYOR  
STATE OF UTAH

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)

LATITUDE = 39°38'43.26" (39.645350)

LONGITUDE = 109°28'15.84" (109.471067)

(AUTONOMOUS NAD 27)

LATITUDE = 39°38'43.38" (39.645383)

LONGITUDE = 109°28'13.39" (109.470386)

### LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

UINTAH ENGINEERING & LAND SURVEYING

85 SOUTH 200 EAST - VERNAL, UTAH 84078

(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 04-13-07	DATE DRAWN: 04-20-07
PARTY J.W. Q.B. L.K.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE SUMMIT OPERATING, LLC	

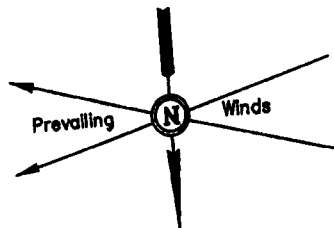
# SUMMIT OPERATING, LLC.

## LOCATION LAYOUT FOR

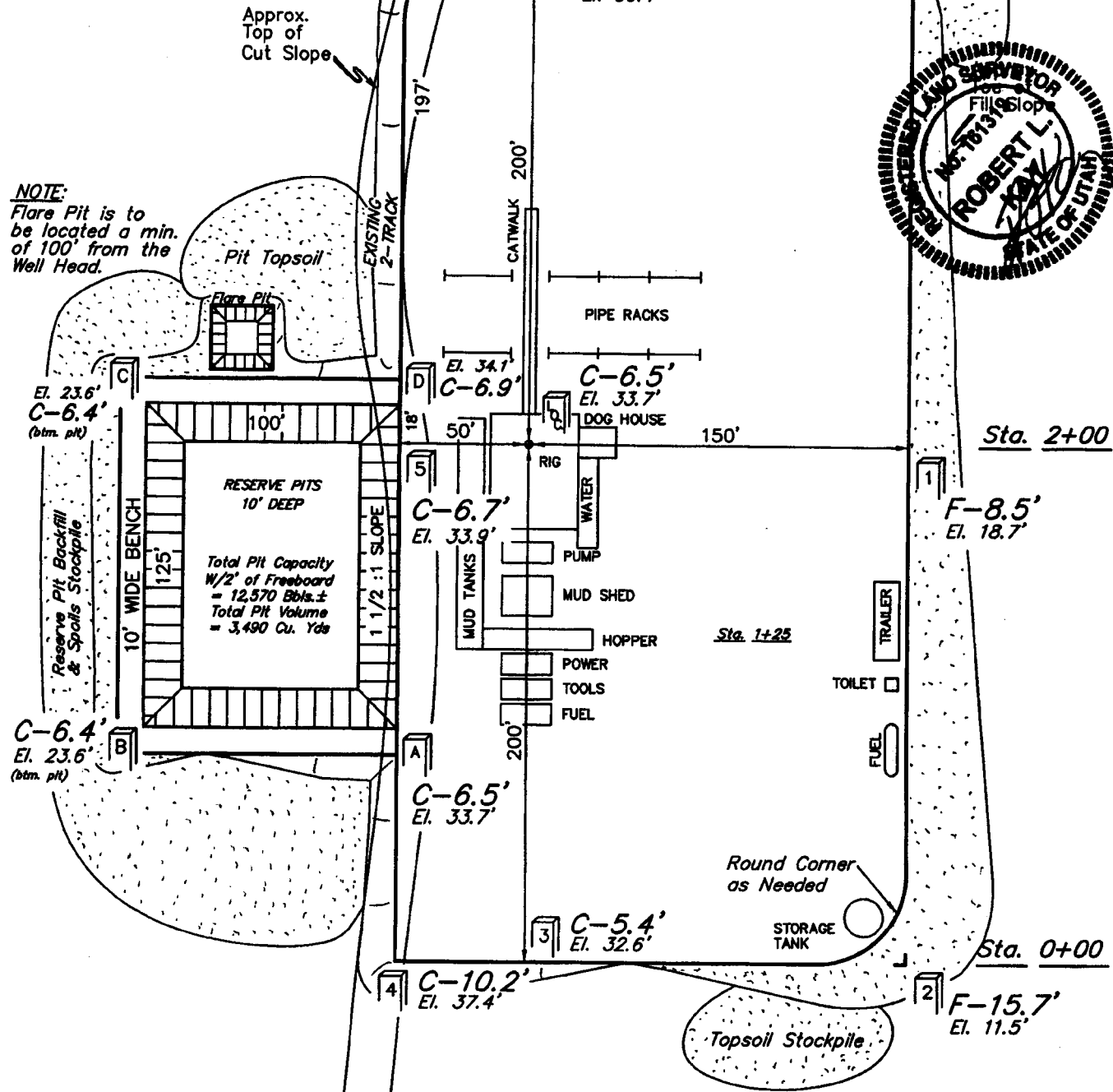
FIGURE #1

STATE #8-32-13-22  
SECTION 32, T13S, R22E, S.L.B.&M.

1838' FNL 476' FEL



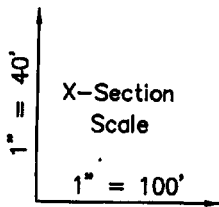
SCALE: 1" = 60'  
DATE: 04-20-07  
Drawn By: L.K.



Elev. Ungraded Ground at Location Stake = 6633.7'

Elev. Graded Ground at Location Stake = 6627.2'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1077



# SUMMIT OPERATING, LLC.

## TYPICAL CROSS SECTIONS FOR

STATE #8-32-13-22  
SECTION 32, T13S, R22E, S.L.B.&M.  
1838' FNL 476' FEL

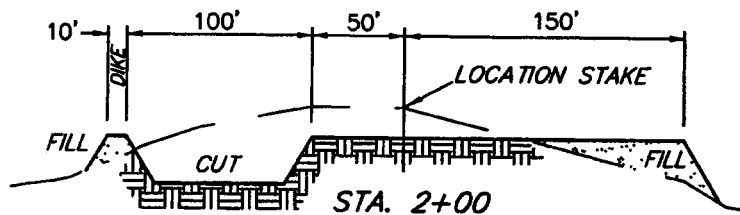
DATE: 04-19-07  
Drawn By: L.K.

FIGURE #2

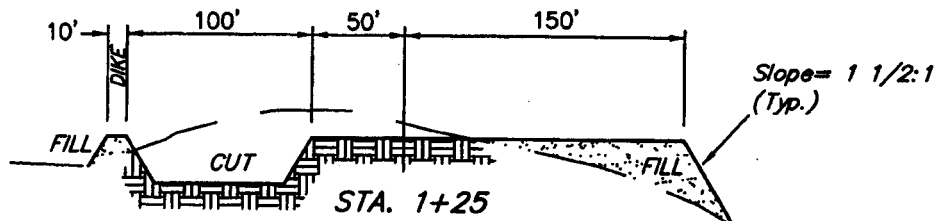


Preconstruction  
Grade

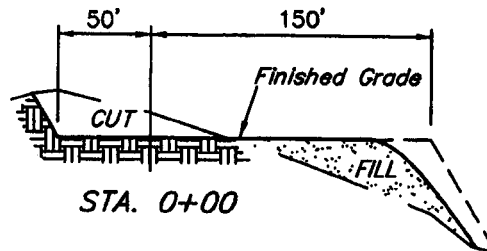
STA. 4+00



STA. 2+00



STA. 1+25



STA. 0+00

### NOTE:

Topsail should not be  
Stripped Below Finished  
Grade on Substructure Area.

\* NOTE:  
FILL QUANTITY INCLUDES  
5% FOR COMPACTION

### APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,200 Cu. Yds.  
Remaining Location = 12,220 Cu. Yds.  
  
TOTAL CUT = 14,420 CU.YDS.  
FILL = 10,470 CU.YDS.

EXCESS MATERIAL = 3,950 Cu. Yds.  
Topsoil & Pit Backfill  
(1/2 Pit Vol.) = 3,950 Cu. Yds.  
EXCESS UNBALANCE = 0 Cu. Yds.  
(After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017

# SUMMIT OPERATING, LLC

STATE #8-32-13-22

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 32, T13S, R22E, S.L.B.&M.



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: WESTERLY

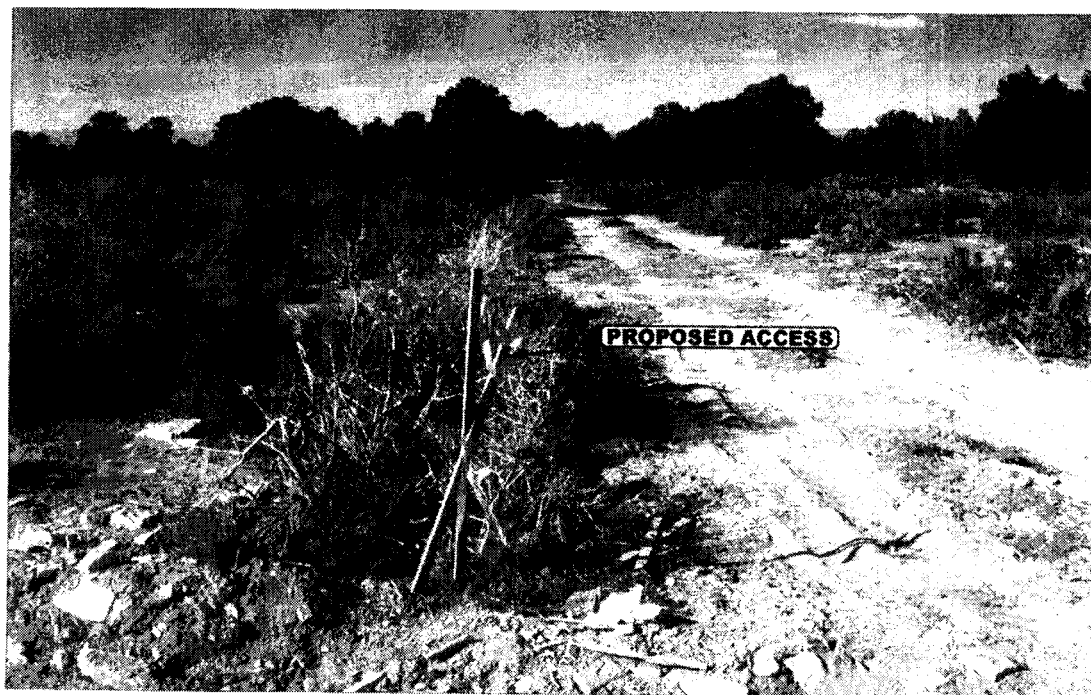


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHERLY



UELS

Uintah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

04 18 07  
MONTH DAY YEAR

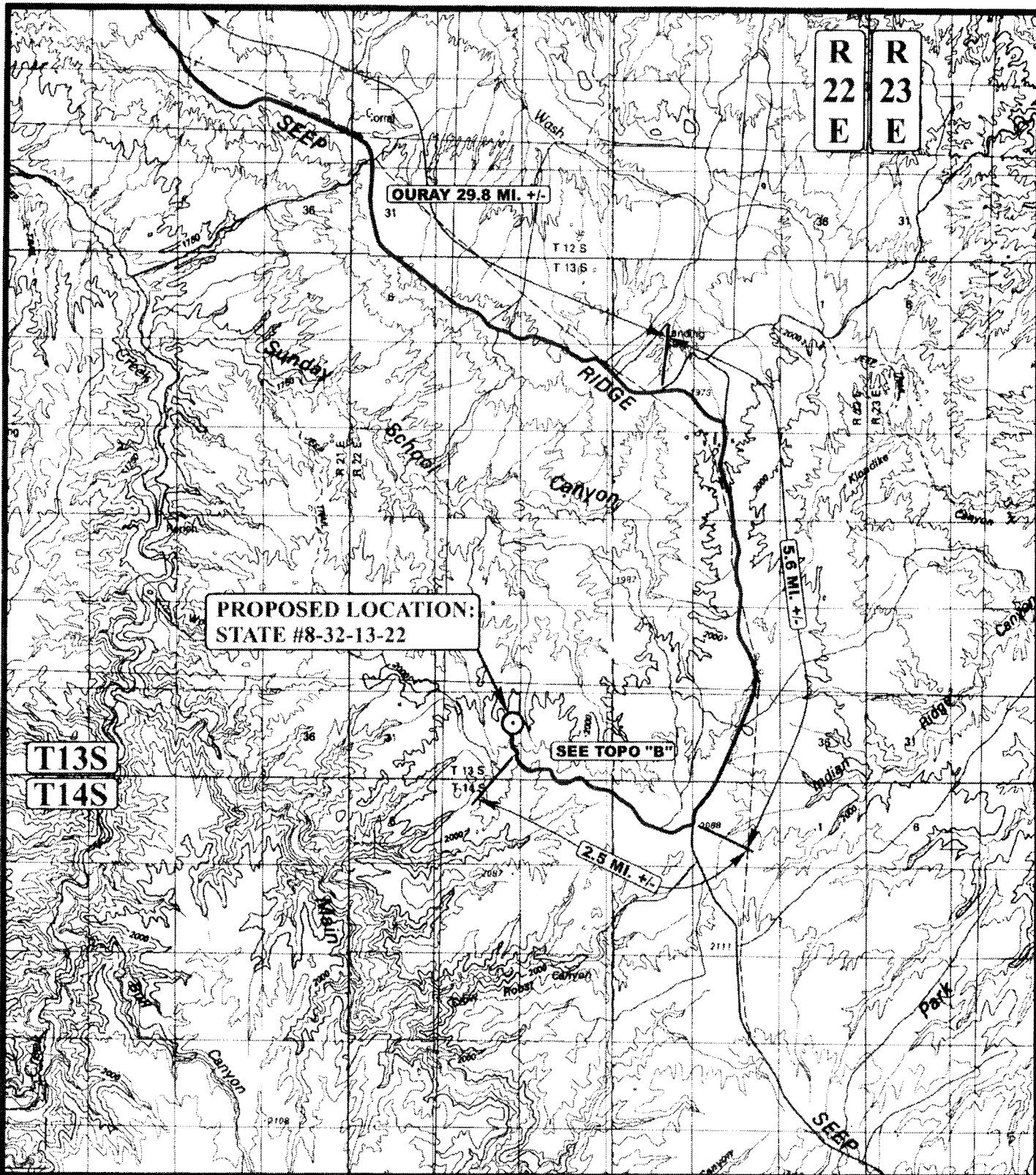
PHOTO

TAKEN BY: J.W.

DRAWN BY: C.P.

REVISED: 00-00-00





# **LEGEND:**

○ PROPOSED LOCATION

**SUMMIT OPERATING, LLC**

**STATE #8-32-13-22**

**SECTION 32, T13S, R22E, S.L.B.&M.**

**1838' FNL 476' FEL**



**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC**  
**MAP**

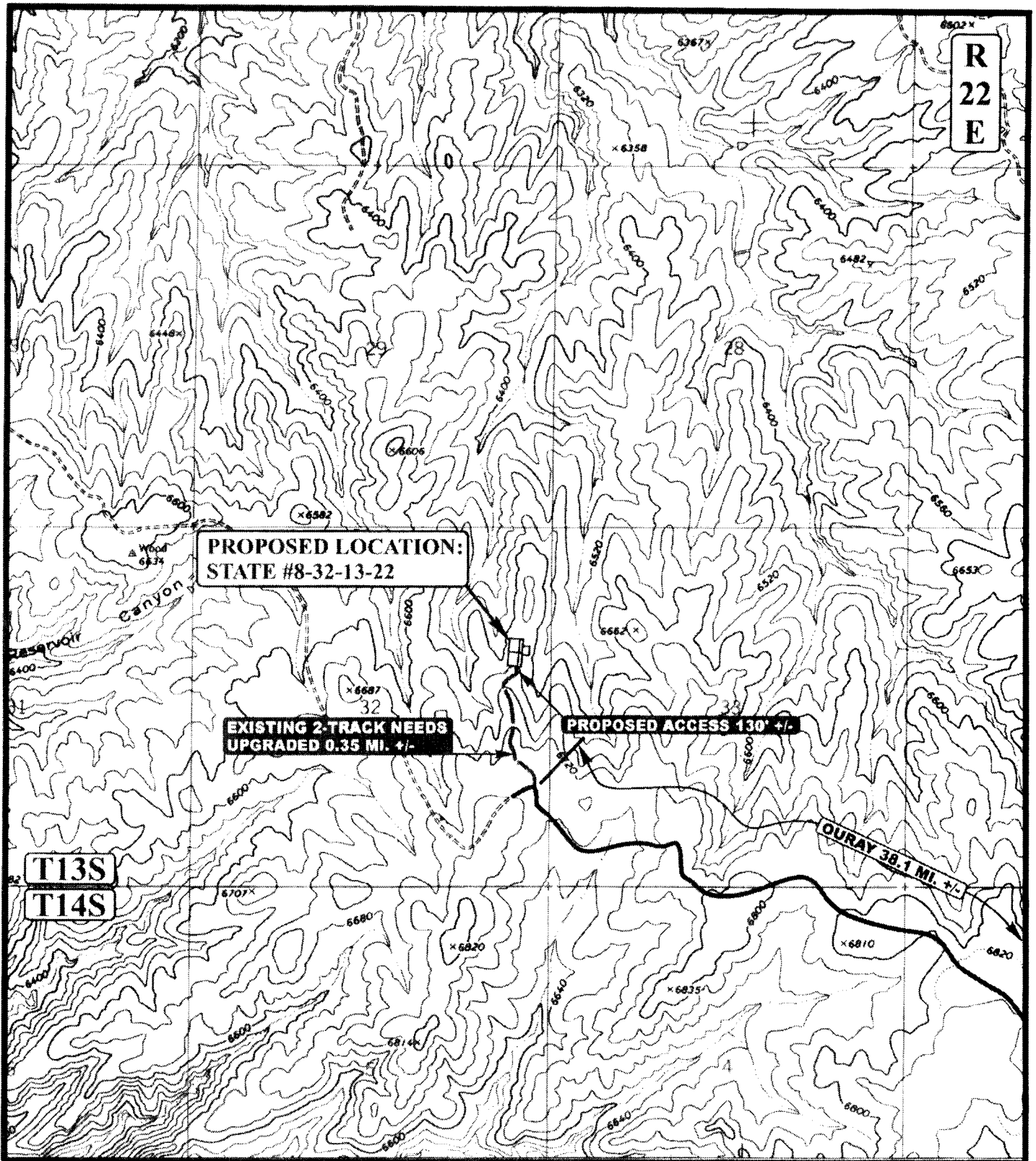
**04 18 07**  
MONTH DAY YEAR

SCALE: 1:100,000

DRAWN BY: C.P.

REVISED: 00-00-00





# **LEGEND:**

- EXISTING ROAD
- - - PROPOSED ACCESS ROAD
- - - EXISTING 2-TRACK NEEDS UPGRADED



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



## **SUMMIT OPERATING, LLC**

**STATE #8-32-13-22**  
**SECTION 32, T13S, R22E, S.L.B.&M.**  
**1838' FNL 476' FEL**

**TOPOGRAPHIC  
MAP**

**04 18 07**  
 MONTH DAY YEAR

**SCALE: 1" = 2000'** **DRAWN BY: C.P.** **REVISED: 00-00-00**

**B  
TOPO**

CONFIDENTIAL

## DIVISION OF OIL, GAS AND MINING

### **SPUDDING INFORMATION**

Name of Company: SUMMIT OPERATING, LLC

Well Name: STATE 8-32-13-22

Api No: 43-047-37521 Lease Type: STATE

Section 32 Township 13S Range 22E County UINTAH

Drilling Contractor PETE MARTIN RIG # RATHOLE

### **SPUDDED:**

Date 07/21/07

Time 10:00 AM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by DARRELL

Telephone # (435) 828-5667

Date 07/25/07 Signed CHD

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: Summit Operating, LLC  
Address: PO Box 683909  
city Park City  
state UT zip 84068-3909

Operator Account Number: N 2315  
Phone Number: (435) 940-9001

**Well 1**

4304737521	State 8-32-13-22	SENE	32	13S	22E	Uintah
A	99999	16257	7/21/2007	7/26/07		
Comments: <i>M NKP</i>						<b>CONFIDENTIAL</b>

**Well 2**

Comments:						

**Well 3**

Comments:						

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Marie Adams

Name (Please Print)

Signature

Operations

Title

7/25/2007

Date

**RECEIVED****JUL 25 2007**

DIV. OF OIL, GAS &amp; MINING

CONFIDENTIAL

FORM 9

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: <u>ML-47794</u>
2. NAME OF OPERATOR: <b>Summit Operating, LLC</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
3. ADDRESS OF OPERATOR: PO Box 683909    CITY <u>Park City</u> STATE <u>UT</u> ZIP <u>84032</u>		7. UNIT or CA AGREEMENT NAME:  
4. LOCATION OF WELL FOOTAGES AT SURFACE: _____  QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>SENE 32 13S 22E</u>		8. WELL NAME and NUMBER: <b>State 8-32-13-22</b>
PHONE NUMBER: <u>(435) 940-9001</u>		9. API NUMBER: <b>4304737521</b>
COUNTY: <u>Uintah</u> STATE: <u>UTAH</u>		10. FIELD AND POOL, OR WILDCAT:  

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: _____
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The above captioned well as permitted to run 11,650' of 5-1/2" 17# N-80 LT&C new casing. We would like to modify our plans and run 4-1/2" 1160 P110 LT&C new casing. Please notify us if you need additional information regarding this change.

*Propose to increase Cement quantity accordingly for increased annular Volume in order to bring cement back to surface. per David Lillywhite 8/8/07*

*DKD*

COPY SENT TO OPERATOR  
Date: 8/9/07  
Initials: DKD

NAME (PLEASE PRINT) <u>David Lillywhite</u>	TITLE <u>President</u>
SIGNATURE	DATE <u>7/27/2007</u>

(This space for State use only)

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS AND MINING

DATE 8/14/07

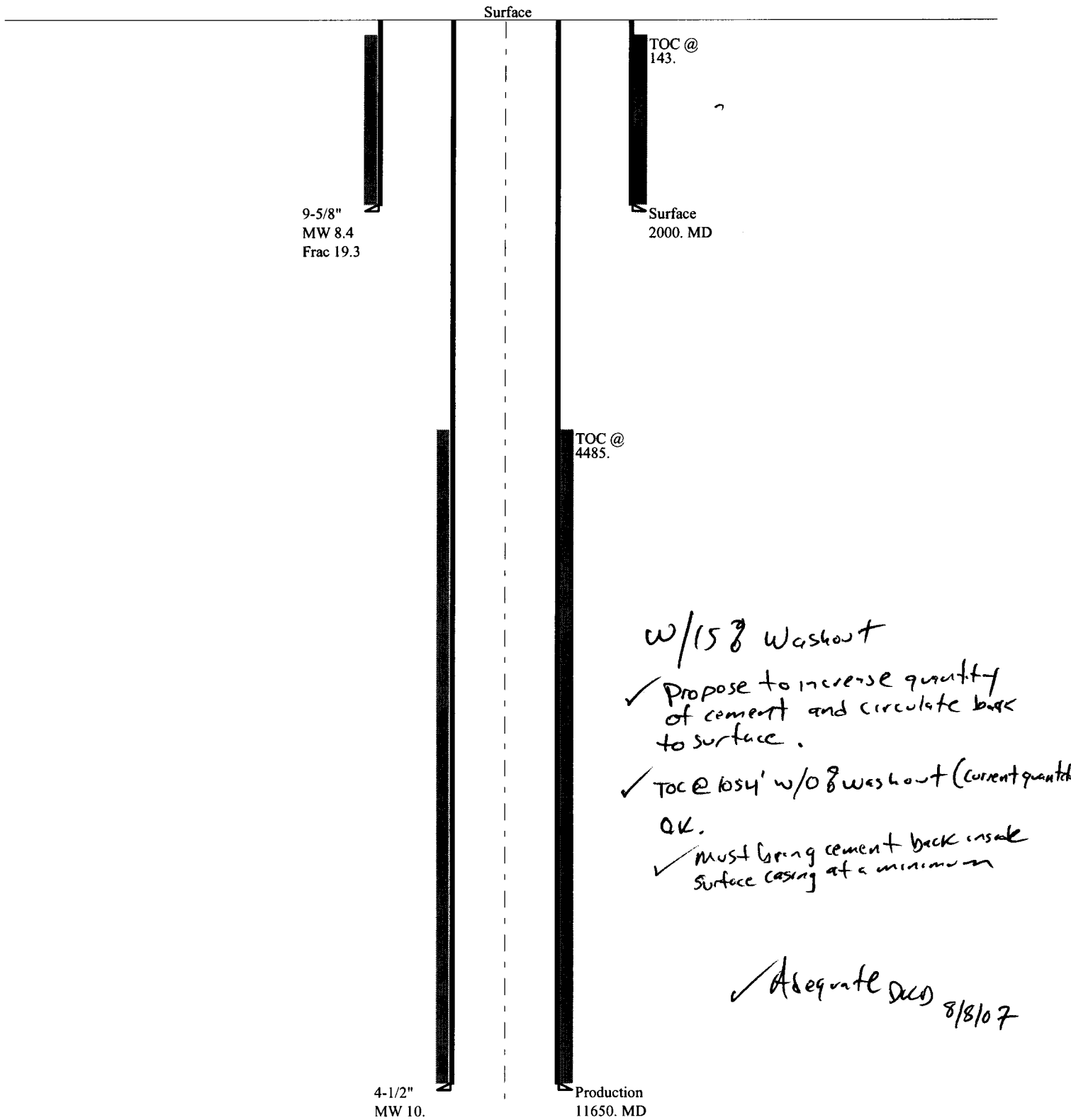
(See Instructions on Reverse Side)

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JUL 30 2007

DIV. OF OIL, GAS & MINING

Casing Schematic



Well name:

**01-06 Summit State 8-32-13-22rev.**Operator: **Summit Exploration Company**String type: **Production**

Project ID:

**43-047-37521**Location: **Uintah County****Design parameters:****Collapse**

Mud weight: 10.000 ppg

Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No

Surface temperature: 65 °F

Bottom hole temperature: 228 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,500 ft

Cement top: 3,616 ft

**Burst**

Max anticipated surface pressure:

4,654 psi

Internal gradient: 0.120 psi/ft

Calculated BHP 6,052 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

**Non-directional string.**

Tension is based on buoyed weight.

Neutral point: 9,909 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	11650	4.5	11.60	P-110	LT&C	11650	11650	3.875	1016.7
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6052	7580	1.252 ✓	6052	10690	1.77 ✓	115	279	2.43 J ✓

Prepared by: Clinton Dworshak  
Div of Oil, Gas & MineralsPhone: 801-538-5280  
FAX: 810-359-3940Date: August 7, 2007  
Salt Lake City, Utah**Remarks:**

Collapse is based on a vertical depth of 11650 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

CONFIDENTIAL

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

5. LEASE DESIGNATION AND SERIAL NUMBER:

ML-47794

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER:

State 8-32-13-22

9. API NUMBER:

4304737521

10. FIELD AND POOL, OR WILDCAT:

Seep Ridge

1. TYPE OF WELL

OIL WELL ☐GAS WELL ☒

OTHER \_\_\_\_\_

2. NAME OF OPERATOR:

Summit Operating, LLC

3. ADDRESS OF OPERATOR:

PO Box 683909

CITY Park City

STATE UT

ZIP 84068

PHONE NUMBER:

(435) 940-9001

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1978' FNL 824' FEL

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 32 13S 22E

STATE:

UTAH

## 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input checked="" type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Production started on 11/15/2007. Our first sales were on 11/15/2007

NAME (PLEASE PRINT) David Lillywhite

TITLE Operations

SIGNATURE

DATE

11/14/07

(This space for State use only)

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NOV 21 2007

DIV. OF OIL, GAS &amp; MINING



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STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

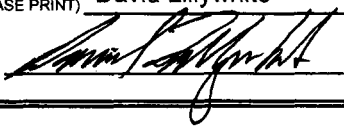
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 47794
2. NAME OF OPERATOR: Summit Operating, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: PO Box 683909 CITY Park City STATE UT ZIP 84068		7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: (435) 940-9001		8. WELL NAME and NUMBER: State 8-32-13-22
10. FIELD AND POOL, OR WILDCAT: Seep Ridge		9. API NUMBER: 4304737521

4. LOCATION OF WELL FOOTAGES AT SURFACE: 1978' FNL 824' FEL COUNTY: Uintah QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 32 13S 22E STATE: UTAH
---

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____  <input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input type="checkbox"/> OTHER: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Summit Operating does hereby request that all information given to the State of Utah be kept confidential.

NAME (PLEASE PRINT) David Lillywhite	TITLE Operations
SIGNATURE 	DATE 4/14/07

(This space for State use only)

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NOV 21 2007

DIV. OF OIL, GAS &amp; MINING

Utah Division of Oil, Gas + Mining  
1594 West North Temple, Ste. 1210  
Box 145801  
Salt Lake City UT 84114-5801

CONFIDENTIAL

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah 43-047-3752/  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Today's Date: 8/12/2007  
 7:00 AM MDT Depth 11,040' (TD @ 22:53 hrs)  
 Previous Report Depth 10,890'  
 24 Hour Ftge 150'  
 Average ROP( ft/hr) 6.25  
 Current Activity Trip For E-Logs  
 Current Formation Wingate

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	KAYENTA	10,924'	-(4,282)
	WINGATE	11,022'	-(4,380)

Current Lithology 100% SS

Background Gas 700 - 800 units

Trip Gas

Connection Gas 5000 to 8000 units

Gas Shows

DEPTH	Total Gas (units)			Chromatograph (ppm)		
	BK GD	Peak	Increase	C1	C2	C3

Sample Shows None

Comments

RECEIVED

NOV 28 2007

DIV. OF OIL, GAS & MINING

## NOTICE

Utah Oil and Gas Conservation General Rule R649-3-21 states that,

- A well is considered completed when the well has been adequately worked to be capable of producing oil or gas or when well testing as required by the division is concluded.
- Within 30 days after the completion or plugging of a well, the following shall be filed:
  - Form 8, Well Completion or Recompletion Report and Log
  - A copy of electric and radioactivity logs, if run
  - A copy of drillstem test reports,
  - A copy of formation water analyses, porosity, permeability or fluid saturation determinations
  - A copy of core analyses, and lithologic logs or sample descriptions if compiled
  - A copy of directional, deviation, and/or measurement-while-drilling survey for each horizontal well

Failure to submit reports in a timely manner will result in the issuance of a Notice of Violation by the Division of Oil, Gas and Mining, and may result in the Division pursuing enforcement action as outlined in Rule R649-10, Administrative Procedures, and Section 40-6-11 of the Utah Code.

---

As of the mailing of this notice, the division has not received the required reports for

Operator: Summit Operating, LLC Today's Date: 02/14/2008

Well:	API Number:	Drilling Commenced:
State 8-32-13-22    wcr	4304737521	07/21/2007

13S      22E      32

To avoid compliance action, required reports should be mailed within 7 business days to:

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

If you have questions or concerns regarding this matter, please call (801) 538-5284.

cc:      Well File  
         Compliance File

CONFIDENTIAL

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MININGAMENDED REPORT ☐  
(highlight changes)

FORM 8

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL:		OIL WELL <input type="checkbox"/>	WELL GAS <input checked="" type="checkbox"/>	DRY <input type="checkbox"/>	OTHER <input type="checkbox"/>		
b. TYPE OF WORK:		NEW WELL <input checked="" type="checkbox"/>	HORIZ. LATS. <input type="checkbox"/>	DEEP-EN <input type="checkbox"/>	RE-ENTRY <input type="checkbox"/>	DIFF. RESVR. <input type="checkbox"/>	OTHER <input type="checkbox"/>
2. NAME OF OPERATOR: Summit Operating, LLC						5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47794	
3. ADDRESS OF OPERATOR: PO Box 683909 Park City UT 84068-3909						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1838' FNL & 476' FEL (SE/4NE/4) AT TOP PRODUCING INTERVAL REPORTED BELOW: Same as above AT TOTAL DEPTH: Same as above						7. UNIT or CA AGREEMENT NAME	
14. DATE SPUNDED: 07/21/2007						8. WELL NAME and NUMBER: State 8-32-13-22	
15. DATE T.D. REACHED: 08/11/2007						9. API NUMBER: 43-047-37521	
16. DATE COMPLETED: 11/14/07						10. FIELD AND POOL, OR WILDCAT Seep Ridge	
17. ELEVATIONS (DF, RKB, RT, GL): 6642' KB 6627' GL						11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SE/4NE/4 Sec 32, T13S R22E SLM	
18. TOTAL DEPTH: MD 11040 TVD same						12. COUNTY Uintah	
19. PLUG BACK T.D.: MD 10996 TVD same						13. STATE UTAH	
20. IF MULTIPLE COMPLETIONS, HOW MANY? *						14. ELEVATIONS (DF, RKB, RT, GL): 6642' KB 6627' GL	
21. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) Open Hole: GR-SP-DIL-Caliper-Density-Neutron Cased Hole: GR-CBL-CCL CBL, SD, DSN, HRI						22. ELEVATIONS (DF, RKB, RT, GL): 6642' KB 6627' GL	
23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit copy)						24. CASING AND LINER RECORD (Report all strings set in well)	

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
12 1/4"	9 5/8"	36	Surf	2032'	None	Prem50/50, 565	13	Surf	
7 7/8"	4 1/2"	11.60	Surf	11036'	8005'	Prem 50/50, 1760	460.8	2043	

## 25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	10569'							

## 26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
Castlegate	5645'	5988'						
Cedar Mountain	9879'	9903'						
Moab Tongue	10582'	10610'						
Entrada-Slick Rock Member	10610'	10726'			10583-90, 10594-98, 10611-10620	.38	40	Open

## 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
10583-90, 10594-98, 10611-20	Acidized with 1500 gal 15% HCL
10583-90, 10594-98, 10611-20	Frac'd w/ 62000 gals fluid (24155 gals comb slick-wtr & 25# linear gel pad, 31219 gal 25# linear gel (sand laden) & 6382 gal slick-wtr flush) and 50040# 20/40 econoprop ceramic proppant.

29. ENCLOSED ATTACHMENTS:		DIRECTIONAL SURVEY		30. WELL STATUS: PRODUCING
<input checked="" type="checkbox"/> ELECTRICAL/MECHANICAL LOGS SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION	<input checked="" type="checkbox"/> GEOLOGIC REPORT CORE ANALYSIS	DST REPORT OTHER:		

# 41. INITIAL PRODUCTION

## INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS. N/A	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED: 11/11/2007		TEST DATE: 11/21/2007		HOURS TESTED: 24		TEST PRODUCTION RATES: 759	OIL – BBL: 0	GAS – MCF: 759	WATER – BBL: 112	PROD. METHOD: flowing
CHOKE SIZE: 12/64"	TBG. PRESS. 380	CSG. PRESS. 916	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: 759	OIL – BBL: 0	GAS – MCF: 759	WATER – BBL: 112	STATUS: flowing

### 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Castlegate	5645'	5988'	Sandstone, light gray to off white, decreasing in grain size w/ depth to dark gray shale alternating w/ Sandstone, no visible porosity	Castlegate	5645'
Cedar Mountain	9879'	9903'	Sandstone, white to clear, medium to lower coarse grained, contains Bentonite. Poor intergranular porosity	Cedar Mountain	9879'
Moab Tongue	10582'	10810'	Shale, varicolored, subfissile to limestone to Sandstone, fine grained to silty.	Moab Tongue	10582'
Entrada-Slick Rock Member	10610'	10726'	White to orange sandstones, no visible porosity, dark gray to black shale intervals, carbonaceous	Entrada-Slick Rock Member	10610'

### 32. DISPOSITION OF GAS (Solid, Used for Fuel, Vented, Etc.) Sold

### 35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) David L. Hylwhite TITLE President

SIGNATURE David L. Hylwhite DATE 1-3-08

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340  
Fax: 801-359-3940

**OPERATOR** Summit Operating LLC  
**WELL NAME** State 8-32-13-22  
**LOCATION** SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
**SPUD DATE** 8/1/2007 (drill out from pre-set sfc csg)  
**ELEVATIONS** KB 6,642' GL 6,627'

**Report #** 1

**Today's Date:** 8-2-2007  
**7:00 AM MDT Depth** 2,628'  
**Previous Report Depth** 2,021'  
**24 Hour Ftge** 607'  
**Average ROP( ft/hr)** 80.93  
**Current Activity** Drilling  
**Current Formation** Green River

**Last Sample Top**

Formation	Depth	Datum (Sub Sea)
Green River	Sfc Csg	-

**Current Lithology**

**Background Gas** 15-Oct  
**Trip Gas** None  
**Connection Gas** ?

**Gas Shows**

DEPTH	UNITS			Chromatograph			
	BK GD	Peak	Increase	C1	C2	C3	C4
2,290'	10	82	72	tr	Pred C2	tr	tr
2,400'	10	88	78	tr	Pred C2	tr	

**Sample Shows** None

**Comments**

**RECEIVED**

**JAN 08 2008**

**DIV. OF OIL, GAS & MINING**

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 2

Today's Date: 8-03-2007  
 7:00 AM MDT Depth 4,758'  
 Previous Report Depth 2,628'  
 24 Hour Ftge 2,130'  
 Average ROP( ft/hr) 88.75  
 Current Activity Drilling  
 Current Formation Mesaverde

Last Sample Top

Formation	Depth	Datum (Sub Sea)
Mesaverde	3,644'	(2,998)

Current Lithology 60 % SH, 30% SS, 10% CLYST

Background Gas 115 U

Trip Gas None

Connection Gas 0

Gas Shows

WASATCH

Mesaverde

DEPTH	UNITS			Chromatograph			
	BK GD	Peak	Increase	C1	C2	C3	C4
3,524'	12	156	144	pred C1			
4,062'	20	406	386	pred C1	tr	tr	-
4,433'	30	242	212	pred C1	tr	-	-
4,618'	50	392	342	pred C1	tr	-	-

Sample Shows None

Comments



OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 3

Today's Date: 8/4/2007  
 7:00 AM MDT Depth 6,106'  
 Previous Report Depth 4,758'  
 24 Hour Ftge 1,348'  
 Average ROP( ft/hr) 56.17  
 Current Activity Drilling  
 Current Formation Mancos

Last Sample Top:	Formation	Depth	Datum (Sub Sea)
	Castlegate	5,648'	(994)
	Mancos	5,996'	(646)

Current Lithology 100% Shale

Background Gas 150  
 Trip Gas None  
 Connection Gas 0

Gas Shows

DEPTH	UNITS			Chromatograph			
	BK GD	Peak	Increase	C1	C2	C3	C4
4728	50	583	533	58278	0	0	0
4786	20	438	418	39250	3816	711	0
4813	90	497	407	44142	4398	1146	0
4867	200	1187	987	107675	9018	2022	0
4881	250	877	627	78308	7462	1876	0
5027	110	6828	6718	611549	59553	11667	0
4999	100	4517	4417	405729	33613	12396	0
4972	225	1490	1265	131328	12648	4463	524
5088	200	3666	3466	335970	26389	4019	205
5136	100	2723	2623	230761	27140	14411	0
5146	225	4028	3803	348754	36814	15414	1803
5180	400	2772	2372	243714	22201	9586	1695
5226	250	2615	2365	227615	23586	8075	2170
5251	500	3352	2852	290813	31941	10425	2036
5294	200	2819	2619	243252	20915	13612	4076
5326	123	4464	4341	368719	38317	29530	9810
5346	200	1411	1211	122494	12487	6066	0
5405	300	1880	1580	167596	15435	4662	313

Sample Shows  
 Comments None

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 4

Today's Date: 8/5/2007  
 7:00 AM MDT Depth 6,762'  
 Previous Report Depth 6,106'  
 24 Hour Ftge 656'  
 Average ROP( ft/hr) 27.33  
 Current Activity Trip for NB #2  
 Current Formation Mancos

Last Sample Top:	Formation	Depth	Datum (Sub Sea)
	Mancos	5,996'	(646)

Current Lithology 60% Sandstone, 40% Shale

Background Gas 300  
 Trip Gas None  
 Connection Gas 0

Gas Shows	DEPTH	UNITS			Chromatograph (ppm)			
		BK GD	Peak	Increase	C1	C2	C3	C4
Mesaverde	5440	200	1374	1174	121580	12037	3823	0
	5452	200	1160	960	102631	10161	3227	0
	5555	240	822	582	74343	5516	2269	70
Castlegate	5676	200	1096	896	98432	8516	2651	21
	5744	200	1533	1333	125508	16028	9094	2661
	5787	100	1930	1830	172361	15974	4322	351
Mancos	6536	250	1181	931	110156	6823	1147	0
	6561	350	2305	1955	217086	11385	2070	0
	6747	300	2943	2643	270437	17024	6787	0

Sample Shows None

Comments

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 5

Today's Date: 8/6/2007  
 7:00 AM MDT Depth 8,200'  
 Previous Report Depth 6,762'  
 24 Hour Ftge 1,438'  
 Average ROP( ft/hr) 59.92  
 Current Activity Drilling  
 Current Formation Mancos

Last Sample Top:

Formation	Depth	Datum (Sub Sea)
Mancos	5,996'	(646)

Current Lithology 100% Shale

Background Gas 2000

Trip Gas None

Connection Gas 0

Gas Shows

DEPTH	UNITS			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4
7611	500	8453	7953	469308	160131	153751	62067
7627	2000	8044	6044	657646	93125	41021	12576
* 7659	800	4654	3854	397970	48268	16448	2696
* 7691	1000	2861	1861	242725	30681	10908	1757
* 7721	1000	2275	1275	193344	24196	8592	1393
7754	1200	1790	590	151577	19817	6562	1002
7905	1900	2819	919	238099	30921	10747	2112

\*probable re-circulated gas

Sample Shows NONE

Comments

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 6

Today's Date: 8/7/2007  
 7:00 AM MDT Depth 9,366'  
 Previous Report Depth 8,200'  
 24 Hour Ftge 1,166'  
 Average ROP( ft/hr) 48.58  
 Current Activity Drilling  
 Current Formation Mancos

Last Sample Top:	Formation	Depth	Datum (Sub Sea)
	Mancos	5,996'	(646)

Current Lithology 100% Shale

Background Gas 1200

Trip Gas None

Connection Gas 6000 - 7000 Units

Gas Shows

DEPTH	UNITS			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4
8083	2800	7913	5113	653875	98926	30857	7620
8110	1800	7349	5549	607874	92317	28116	6628
8179	2750	4786	2036	391534	61458	19816	5769
8210	2750	8123	5373	614614	122151	53640	21850
8280	2000	8563	6563	517202	176570	114575	47975
8370	6000	8462	2462	645148	128640	49543	22911
8390	6000	8484	2484	635817	131508	57424	23695
8559	2300	7181	4881	596937	86344	26545	8289
8666	1300	8476	7176	699355	109109	29530	9635
8844	1000	8768	7768	581514	165333	92316	37671

Sample Shows None

Comments

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 7

Today's Date: 8/8/2007  
 7:00 AM MDT Depth 10,092'  
 Previous Report Depth 9,366'  
 24 Hour Ftge 726'  
 Average ROP( ft/hr) 30.25  
 Current Activity Drilling  
 Current Formation Morrison

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	Dakota Silt	9,694'	-(3,052)
	Dakota Marker	9,741'	-(3,099)
	Dakota SS	9,768'	-(3,126)
	Cedar Mtn	9,834'	-(3,192)
	Morrison	9,968'	-(3,326)

Current Lithology 60% SH, 40% SS

Background Gas 600  
 Trip Gas None  
 Connection Gas 5000 units

Gas Shows

DEPTH	UNITS			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4
9509	2000	3669	1669	307302	46446	10146	3050
9545	1200	4256	3056	358149	51742	11673	4015
9586	1700	2929	1229	245585	36480	8202	2623
9617	1400	3229	1829	270664	39905	9184	3094
9837	700	3268	2568	277712	37561	9430	2047
9874	600	1916	1316	162243	22803	5321	1270
9892	450	2696	2246	233241	29458	5756	1186

Sample Shows None

Comments

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 8

Today's Date: 8/9/2007  
 7:00 AM MDT Depth 10,476'  
 Previous Report Depth 10,092'  
 24 Hour Ftge 384'  
 Average ROP( ft/hr) 16.00  
 Current Activity Trip for bit  
 Current Formation Morrison

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	Morrison	9,968'	-(3,326)

Current Lithology 50% Varicolored Shale, 50% lt gn Claystone, trace SS.

Background Gas 600 - 700 units  
 Trip Gas None  
 Connection Gas 4000 to 5000 units

Gas Shows	DEPTH	UNITS			Chromatograph (ppm)			
		BK GD	Peak	Increase	C1	C2	C3	C4
Morrison	10056	800	1467	667	125673	16579	4019	410

Sample Shows None

**OPERATOR** Summit Operating LLC  
**WELL NAME** State 8-32-13-22  
**LOCATION** SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
**SPUD DATE** 8/1/2007 (drill out from pre-set sfc csg)  
**ELEVATIONS** KB 6,642' GL 6,627'

**Report #** 9

**Today's Date:** 8/10/2007  
**7:00 AM MDT Depth** 10,599'  
**Previous Report Depth** 10,476'  
**24 Hour Ftge** 123'  
**Average ROP( ft/hr)** 5.13  
**Current Activity** Drilling  
**Current Formation** Entrada

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	SUMMERVILLE	10,484'	-(3,842)
	CURTIS	10,532'	-(3,890)

**Current Lithology** 50% Varicolored Shale, 50% lt gn Claystone, trace SS.

**Background Gas** 450  
**Trip Gas** None  
**Connection Gas** 4000 to 5000 units

**Gas Shows - None**

DEPTH	UNITS			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4

**Sample Shows** None

**Comments**



**OPERATOR** Summit Operating LLC  
**WELL NAME** State 8-32-13-22  
**LOCATION** SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
**SPUD DATE** 8/1/2007 (drill out from pre-set sfc csg)  
**ELEVATIONS** KB 6,642' GL 6,627'

**Report #** 10

**Today's Date:** 8/11/2007  
**7:00 AM MDT Depth** 10,890'  
**Previous Report Depth** 10,599'  
**24 Hour Ftge** 291'  
**Average ROP( ft/hr)** 12.13  
**Current Activity** Drilling  
**Current Formation** Navajo

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	ENTRADA	10,624'	-(3,982)
	CARMEL	10,704'	-(4,062)
	NAVAJO	10,802'	-(4,160)

**Current Lithology** 100% SS  
**Background Gas** 500 to 600 units  
**Trip Gas** None  
**Connection Gas** 5000 to 8000 units

**Gas Shows - None**

DEPTH	Total Gas (units)			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4
10630	600	3497	2897	286729	45457.1	11189.44	2797
10688	400	977	577	46144	9223	2076	404

**Sample Shows** None

**Comments**

OPERATOR Summit Operating LLC  
 WELL NAME State 8-32-13-22  
 LOCATION SE NE Sec 32-T13S-R22E, Uintah Co., Utah  
 SPUD DATE 8/1/2007 (drill out from pre-set sfc csg)  
 ELEVATIONS KB 6,642' GL 6,627'

Report # 11

Today's Date: 8/12/2007  
 7:00 AM MDT Depth 11,040' (TD @ 22:53 hrs)  
 Previous Report Depth 10,890'  
 24 Hour Ftge 150'  
 Average ROP( ft/hr) 6.25  
 Current Activity Trip For E-Logs  
 Current Formation Wingate

	Formation	Depth	Datum (Sub Sea)
Last Sample Top:	KAYENTA	10,924'	-(4,282)
	WINGATE	11,022'	-(4,380)

Current Lithology 100% SS  
 Background Gas 700 - 800 units  
 Trip Gas  
 Connection Gas 5000 to 8000 units

Gas Shows

DEPTH	Total Gas (units)			Chromatograph (ppm)			
	BK GD	Peak	Increase	C1	C2	C3	C4

Sample Shows None

Comments



Steamboat Energy Consultants  
PO BOX 881570  
Steamboat Springs, Colorado 80488  
Office (970) 870 9964

## GEOLOGY REPORT

### Summit Operating LLC

State 8-32-13-22  
1838' FNL & 476' FEL (SENE)  
Sec. 32, T13S - R22E  
Uintah County, Utah

Wellsite Geologist:

Gregg Smith  
Fort Collins, CO  
(970) 819 3444

**RECEIVED**

**JAN 08 2003**

**DIV. OF OIL, GAS & MINING**

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## GEOLOGICAL REPORT

Summit Operating LLC  
State 8-32-13-22

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## Well Resume

Operator: **Summit Operating LLC**

WELL INFORMATION	Well Name	State 8-32-13-22		
	Location	Sec. 32, T13S - R22E		
	County, State	Uintah County, Utah		
	Spot	1838' FNL & 476' FEL (SENE)		
	Spud Date	Wednesday, August 01, 2007		
	Total Depth	Driller 11,040'	Logger 11,020'	
	Completion Date (TD)	Saturday, August 11, 2007		Time: 10:52 PM
HOLE	Hole Size	12 1/4" to 2,065'	7 7/8" to TD	
	Casing	Surface 9 5/8", 36#, set @ 2,038'	Production 4 1/2", 46.01, set @ 11,024'	
	Cement	125 sks 2% CaCl	11.06	
ELEV	GL	6,627'		
	KB	6,642'		
PERSONNEL	Exploration Geologist	David L. Allen, Del-Rio Resources		
	Drilling Foreman	Daryl Knop, Randy Nelson		
	Wellsite Geologist	Gregg Smith, Steamboat Energy Consultants		
	Tool Pusher	Tom Alber, Billy Hatfield		
CONTRACTORS	Drilling Company	True Drilling		
	Rig #	22		
	Mud Company	Mustang Drilling Fluids		
	Mud Type	Native/gel KCl-Poly	Mud Up @ 2,065'	
	Mud Engineer	Dan Kastel		
	Mud Logging Company	None		
	Petrophysical Logging Company	Halliburton		
	Logging Engineer:	Jeff Melancon, C. Shannon		
	Log Suite	HRI/SD/DSN, BCS - TD to Sfc Csg.		
	Drill Stem Test Company	None		
	SUMMARY	Drilling Days	10	
Rotating Hours		201.00		
Bottom Hole Formation		Wingate		
Potentially productive zones		Castlegate, Cedar Mountain, Moab Tongue, Entrada - Slick Rock Member		
Final Status		4 1/2" production Casing set at 11,024'		

# FORMATION LOG TOPS

State 8-32-13-22

Sec. 32, T13S - R22E

Period	Formation		KB 6,642'		unconformities
			LOG TOPS		
			DEPTH	DATUM	
TERTIARY	Green River Formation		Surface	-	(KT)
	Wasatch (estimated, behind surface casing)		1,700'	(+4,942)	
CRETACEOUS	Mesaverde Group	Tuscher/Farrer	3,940'	(+2,702)	(K1)
		Neslen	4,728'	(+1,914)	
		Upper Sego	5,441'	(+1,201)	
		Anchor Mine Tongue	5,458'	(+1,184)	
		Lower Sego	5,530'	(+1,112)	
		Buck Tongue	5,551'	(+1,091)	
		Castlegate	5,645'	(+997)	
		Mancos	Upper Blue Gate	5,988'	
	Prairie Canyon		6,518'	(+124)	
	Lower Blue Gate		7,158'	(-516)	
	Dakota Group	Dakota Silt	9,676'	(-3,034)	(J5)
		Dakota Marker	9,728'	(-3,086)	
		Dakota Sandstone	9,760'	(-3,118)	
		Cedar Mountain	9,879'	(-3,237)	
		Buckhorn Conglomerate	9,903'	(-3,261)	
	Morrison	Brushy Basin	9,946'	(-3,304)	(J4)
		Salt Wash	10,242'	(-3,600)	
		Tidwell ?	10,417'	(-3,775)	
Summerville		10,472'	(-3,830)		
JURASSIC	Curtis	10,528'	(-3,886)	(J3)	
	Moab Tongue	10,582'	(-3,940)		
	Entrada, Slick Rock Member	10,610'	(-3,968)		
	Carmel	10,726'	(-4,084)		(J2)
	Navajo	10,784'	(-4,142)		
	Kayenta	10,900'	(-4,258)		
	Wingate	11,008'	(-4,366)		
TD (DRILLERS)			11,040'		

# GAS SHOWS

Depth	Formation	Total Gas (Units)			Chromatograph (PPM)			
		BK GD	Peak	Increase	C1	C2	C3	C4
2,290'	Wasatch	10	82	72	8200	0	0	0
2,401'		10	89	79	8887	0	0	0
3,524'		12	83	71	8314	0	0	0
4,062'	Mesaverde	20	406	386	36828	3216	516	0
4,433'		30	242	212	22648	1560	0	0
4,618'		50	392	342	35756	2891	0	0
4,728'		50	583	533	58278	0	0	0
4,786'		20	438	418	39250	3816	711	0
4,813'		90	497	407	44142	4398	1146	0
4,867'		200	1187	987	107675	9018	2022	0
4,881'		250	877	627	78308	7462	1876	0
4,972'		225	1490	1265	131328	12648	4463	524
4,999'		100	4517	4417	405729	33613	12396	0
5,027'		110	6828	6718	611549	59553	11667	0
5,088'		200	3666	3466	335970	26389	4019	205
5,136'		100	2723	2623	230761	27140	14411	0
5,146'		225	4028	3803	348754	36814	15414	1803
5,180'		400	2772	2372	243714	22201	9586	1695
5,226'		250	2615	2365	227615	23586	8075	2170
5,251'		500	3352	2852	290813	31941	10425	2036
5,294'		200	2819	2619	243252	20915	13612	4076
5,326'		123	4464	4341	368719	38317	29530	9810
5,346'		200	1411	1211	122494	12487	6066	0
5,405'		300	1880	1580	167596	15435	4662	313
5,440'		200	1374	1174	121580	12037	3823	0
5,452'		200	1160	960	102631	10161	3227	0
5,555'		240	822	582	74343	5516	2269	70
5,676'	Castlegate	200	1096	896	98432	8516	2651	21
5,744'		200	1533	1333	125508	16028	9094	2661
5,787'		100	1930	1830	172361	15974	4322	351
6,536'	Mancos	250	1181	931	110156	6823	1147	0
6,561'		350	2305	1955	217086	11385	2070	0
6,747'		300	2943	2643	270437	17024	6787	0
7,611'		500	8453	7953	469308	160131	153751	62067
7,627'		2000	8044	6044	657646	93125	41021	12576
7,659'		* 800	4654	3854	397970	48268	16448	2696
7,691'		* 1000	2861	1861	242725	30681	10908	1757
7,721'		* 1000	2275	1275	193344	24196	8592	1393
7,754'		1200	1790	590	151577	19817	6562	1002
7,905'		1900	2819	919	238099	30921	10747	2112
8,083'		2800	7913	5113	653875	98926	30857	7620
8,110'		1800	7349	5549	607874	92317	28116	6628
8,179'		2750	4786	2036	391534	61458	19816	5769
8,210'		2750	8123	5373	614614	122151	53640	21850
8,280'		2000	8563	6563	517202	176570	114575	47975

# GAS SHOWS

Depth	Formation	Total Gas (Units)			Chromatograph (PPM)			
		BK GD	Peak	Increase	C1	C2	C3	C4
8,370'		6000	8462	2462	645148	128640	49543	22911
8,390'		6000	8484	2484	635817	131508	57424	23695
8,491'		8000	8101	101	674578	100350	26131	9004
8,524'		2500	8421	5921	681979	115610	32515	11956
8,559'		2300	7181	4881	596937	86344	26545	8289
9,509'		2000	3669	1669	307302	46446	10146	3050
9,545'		1200	4256	3056	358149	51742	11673	4015
9,586'		1700	2929	1229	245585	36480	8202	2623
9,617'	Dakota Group	1400	3229	1829	270664	39905	9184	3094
9,837'		700	3268	2568	277712	37561	9430	2047
9,874'		600	1916	1316	162243	22803	5321	1270
9,892'		450	2696	2246	233241	29458	5756	1186
10,056'	Morrison	800	1467	667	125673	16579	4019	410
10,630'	Entrada *	600	3497	2897	286729	45457	11189	2797
10,688'		400	977	577	78144	15629	3516	684

\* Re-Circulated or associated with Connection Gas



## Summary and Conclusions

The State 8-32-13-22 was drilled out from under pre-set surface casing on 8/1/07 at 11:00 PM. Utilizing mud motors and PDF bits the hole was drilled quickly (201 total rotating hours) to a total depth of 11,040' (drillers depth) on 8/11/2007. There were no significant delays or problems throughout drilling operations.

Potentially productive zones include the Castlegate at 5,734'. Abundant fracture gas was present throughout the Mancos Formation. Three potentially gas productive Dakota/Cedar Mountain sands are present at 9,822' to 9,828', 9,860' to 9,864', and 9,872' to 9,876'. Gas production may also be possible from zones in the Morrison at 10,038' to 10,042' and the Moab Tongue of the Curtis Formation at 10,584' to 10,590'. Possible completion targets in the Entrada Sandstone are at 10,611' to 10,620' and 10,624' to 10,630'.

Four and ½' production casing was set to further evaluate all potentially productive zones.

# DAILY DRILLING CHRONOLOGY

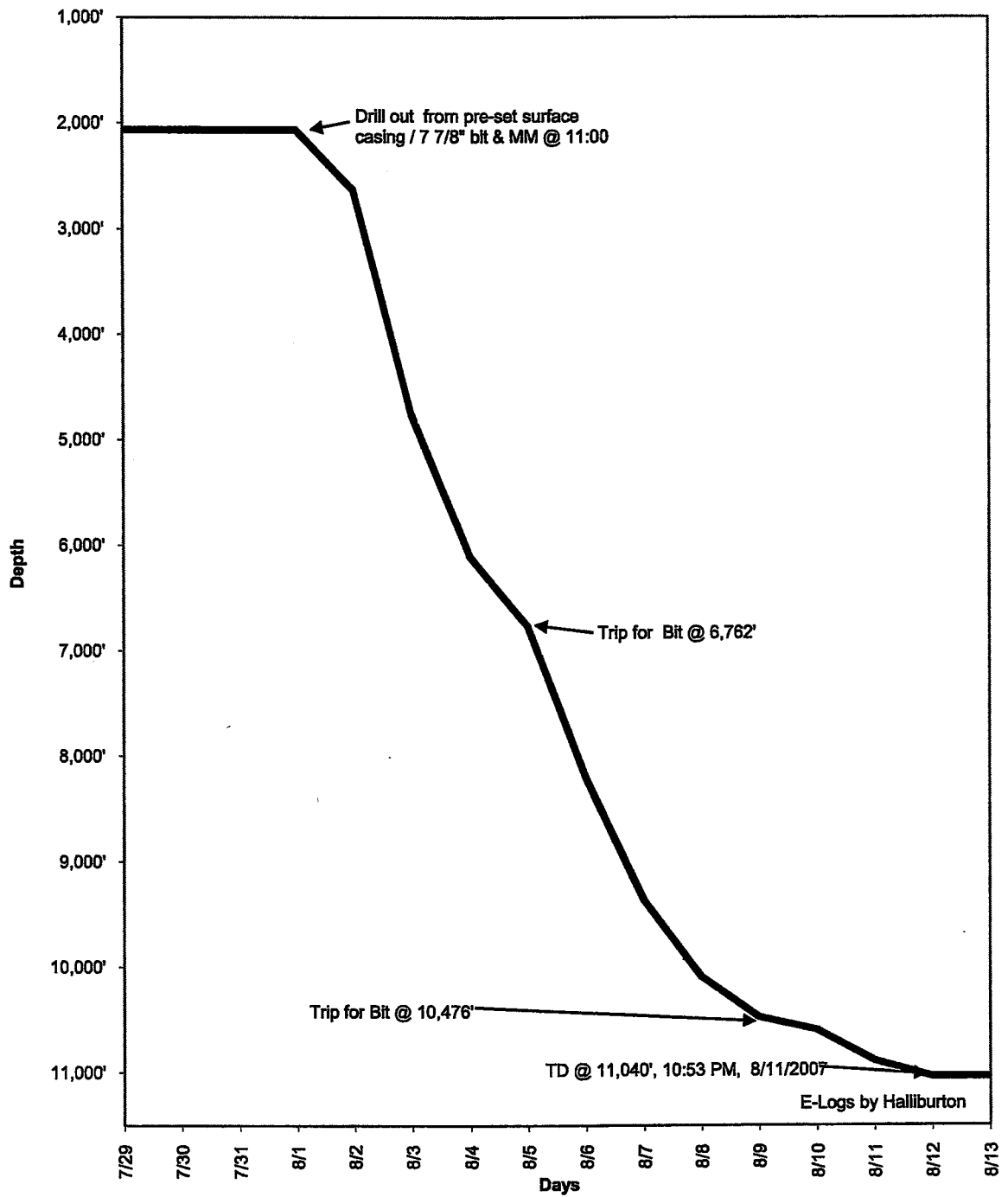
Summit Operating LLC

State 8-32-13-22

Day	DATE (2007)	7:00 AM DEPTH (MDT)	Footage Previous 24 Hrs.	Activity
1	7/29	2,065'	0'	Move in Rig up on pre drilled and cased hole.
2	7/30	2,065'	0'	Move in rig up drilling rig.
3	7/31	2,065'	0'	Nipple up.
4	8/1	2,065'	0'	Nipple up, change HCR Valve, pressure test OK, pick up drill pipe to 1963', drill cement, float collar and shoe, drill out 23:00 hrs, drilling.
5	8/2	2,628'	563'	Drilling with mud motor, directional survey, drilling.
6	8/3	4,758'	2,130'	Drilling.
7	8/4	6,106'	1,348'	Drilling, trip for bit and mud motor @ 6,762'.
8	8/5	6,762'	656'	Finish trip, drilling.
9	8/6	8,200'	1,438'	Drilling.
10	8/7	9,366'	1,166'	Drilling.
11	8/8	10,092'	726'	Drilling, trip for bit @ 10,476'.
12	8/9	10,476'	384'	Trip for bit, drilling.
13	8/10	10,599'	123'	Drilling.
14	8/11	10,890'	291'	Drilling, TD @ 22:52 hrs. condition hole for logs.
15	8/12	11,040'	150'	Condition hole, run logs.
16	8/13	11,040'	0'	Condition hole for casing.

# RATE / TIME CHART

**STATE 8-32-13-22**



# DRILLING PARAMETERS - DIRECTIONAL SURVEYS

Operator: Summit Operating LLC

Well Name: State 8-32-13-22

DRILLING PARAMETERS				
DEPTH	ROTARY TABLE SPEED	WT. ON BIT (1000 lbs)	PUMP PRESSURE	STROKES PER MINUTE
2,065'	55/97	16	1000	120
3,276'	55/97	16	1000	120
3,991'	55/97	20	1600	120
4,670'	55/97	14/18	1150	120
5,150'	54/97	18	1500	120
5,666'	55/97	18	1600	120
6,083'	55/97	20	1675	120
6,511'	55/97	20	1675	120
6,762'	55/97	14	1595	120
8,122'	55/97	15	1800	114
8,642'	52/97	15	1800	114
9,330'	53/97	15	1945	114
10,074'	53/97	22	2025	115
10,470'	50/97	25	1700	115
10,585'	50/97	20	1485	115
10,884'	53/97	30	2026	115
11,025'	52/83	30	1875	115

DIRECTIONAL SURVEYS	
DEPTH	INCLINATION
2,309'	1°
3,201'	1.75°
3,720'	1.25°
4,214'	1°
4,583'	3°
5,204'	2.25°
5,540'	2°
6,404'	3°
6,762'	2°
10,403'	4°
11,040'	2°

# BIT RECORD

OPERATOR: Summit Operating LLC

WELL NAME: State 8-32-13-22

Drill Pipe	4 1/2"	16.6#
Drill Collars	15	

PUMPS	#1	Emsco F-800	6X9
	#2	G-D PZ-8	6X8

CONTRACTOR	True Drilling	
	RIG #	22

NO	SIZE	MAKE	TYPE	JET	SERIAL	DEPTH OUT	FEET	HOURS	FT/HR	ACCUM DRLG HRS	WT 1000 LBS	RPM	VERT DEV	PUMP PRESS	SPM		MUD			DULL COND				FORMATION REMARKS
															1	2	WT	VIS	WL	T	B	G	OTHER	
1	7 7/8	HTC	506Z	6x16	7111101	6762	4697	62 1/2	75	62.5	14	55/100	2	1500	120		9.1	37	8.8	2	NA	2		Mancos
2	7 7/8	HTC	506ZX	6x16	7112848	10478	3716	91	41	153 1/2	14	55/100	4	1500	120		9.2	38	7.0	1	NA	2		Morrison
3	7 7/8	HTC	506ZX	6x16	7115689	11040	562	47 1/2	12	201	15/35	55/7	3	2000	120		9.1	46	9.4	1	NA	1		Wingate

201 Total Rotating Hours

# DAILY DRILLING MUD REPORT

Operator: Summit Operating LLC

Well Name: State 8-32-13-22

Mud-up Depth: 2,065' Mud Type: KCl-Poly Mustang Drilling Fluids

Report #	1	2	3	4	5	6	7	8	9	10
Date, 2007	7/29	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8
Depth (ft) TVD	0'	0'	0'	2,838'	4,789'	6,397'	7,198'	8,395'	9,120'	10,090'

Weight (lbs/gal.)	Spud Mud	8.4	8.4	8.7	8.8	9.1	9.2	9.1+	9.1+	9.2
Funnel Viscosity (Sec/qt. API)		28	35	38	36	37	38	37	38	40.0
Plastic Viscosity cp		4	9	11	10	11	12	12	13	15.0
Yield Point (lb/100 ft <sup>2</sup> .)		2	8	12	8	10	14	11	11	13.0
Gel Strength 10 sec/10 min.		0/1	11/2	1/3	1/2	1/3	1/4	1/3	1/3	2/4
pH (meter)		11.5	9.0	10.5	9.5	9.5	9.8	10.5	9.5	9.9
Filtrate API (ml <sup>3</sup> /30 min)		40.0	10.0	8.6	10.0	8.8	8.4	8.0	7.0	7.0
Cake Thickness 32nd		1	2	1	2	2	2	2	2	2.0
Alkalinity, Mud (Pm)			0.2	0.7	0.4	0.6	0.6	0.1	0.8	0.8
Alkalinity, Filtrate (Pf/Mf)		.3/1.5	.1/1.4	.35/1.1	.2/1.0	.2/1.7	.3/1.9	.4/1.2	.2/1.9	35/1.0
Chloride Content,(mg/L)		13,000	13,000	16,000	11,000	17,000	17,000	17,000	16,000	18,000
Total Hardness, (mg/L)		50	60	50	40	60	80	40	80	60.0
Sand Content (% by Vol.)		tr	tr	tr	0.25	tr	0.25	tr	tr	tr
Retort Solids (% by Vol.)		1.6	1.6	1.3	1.3	1.5	1.6	1.5	1.5	1.5
Retort Liquid (% Vol.) Oil/Wtr		99.4	99.4	97.0	96.5	95.0	94.0	95.0	95.0	94.0
Methylene Blue Capacity		-	-	-	-	-	-	-	-	-
ECD		8.5	8.5	9.0	9.0	9.4	9.6	9.4	9.4	9.5
KCl		2.25	2.44	3.0	2.06	3.19	3.19	3.19	3	3.4

Comments:

# DAILY DRILLING MUD REPORT

Operator: Summit Operating LLC

Well Name: State 8-32-13-22

Mud-up Depth: 2,065' Mud Type: KCl-Poly

	Report #	11	12	13	14	15
Date, 2007		8/9	8/10	8/11	8/12	8/13
Depth (ft) TVD		10,476'	10,635'	10,913'	11,040'	11,040'

Weight (lbs/gal.)	9.2	9.2+	9.2+	9.1	9.2
Funnel Viscosity (Sec/qt. API)	38	42	48	47	45
Plastic Viscosity cp	13	15	19	19	18
Yield Point (lb/100 ft <sup>2</sup> .)	11	14	18	15	14
Gel Strength 10 sec/10 min.	1/3	2/6	3/	2/6	2/6
pH (meter)	10.2	10.3	9.6	10.2	10.2
Filtrate API (ml <sup>3</sup> /30 min)	7.6	8.8	9.4	9.0	8.8
Cake Thickness 32nd	2	2.0	2	2	2
Alkalinity, Mud (Pm)	0.9	1.1	0.9	1.2	1.2
Alkalinity, Filtrate (Pf/Mf)	.4/1.2	.4/1.2	.3/1.0	.4/1.1	.4/1
Chloride Content, (mg/L)	18,000	18,000	19,000	17,000	17,000
Total Hardness, (mg/L)	60	40	40	40	40
Sand Content (% by Vol.)	tr	tr	tr	tr	tr
Retort Solids (% by Vol.)	/6.0	/6.0	/6.0	/5.0	/6.0
Retort Liquid (% Vol.) Oil/Wtr	94	94	94	94	94
Methylene Blue Capacity	15.0	-	-	-	-
ECD	9.48	9.55	9.68	9.48	9.55
KCl (%)	3.38	3.38	3.56	3.19	3.19

Comments:

## SAMPLE DESCRIPTIONS

Drilling in the Wasatch Formation with 7 7/8" PDC Bit and Mud Motor. Samples caught by rig personnel. Annotated sample tops are E-Log picks.

DEPTH	LITHOLOGY
2050-2100	Claystone: red orange to light brown to light red brown, soft, predominantly silty in part.
2100-2150	Claystone; light rounded orange to red brown to pink, soft, silty, trace varigated, occasionally calcareous. Siltstone; red orange to light brown very friable commonly grading to silty Claystone, occasionally silty.
2150-2200	Claystone; light red orange to red brown, soft, predominantly silty, occasionally varigated with light green subwaxy clay, trace white anhydrite stringers. Siltstone; continued a.a., rarely sandy in part.
2200-2250	SILTSTONE; light red orange to brick orange to red brown, soft, slightly calcareous, occasionally black mineral inclusion, commonly grading to Claystone, rarely sandy in part, tight throughout no fluorescence stain odor or cut. CLAYSTONE; light orange to red orange, continued as above.
2250-2300	CLAYSTONE; red orange to red brown, firm to soft, occasionally varigated with light gray Shale, occasionally silty in part, trace anhydritic. SILTSTONE; continued as above, no visible porosity, no show.
2300-2350	SANDSTONE; white to light gray, friable to firm, fine to lower medium grained, subrounded, moderately well sorted and consolidated, trace black mineral inclusion, trace glauconite, occasionally poor intergranular porosity no fluorescence stain odor or cut. CLAYSTONE; continued as above.
2350-2400	SANDSTONE; light red orange to off white, friable to firm, varicolored red to black to brown to green mineral inclusion, calcareous in part, tight throughout, CLAYSTONE; red orange to red brown, commonly silty, trace light green subwaxy SSH, rarely varigated, trace LIMESTONE fragments.
2400-2450	SANDSTONE; white to off white, friable to firm, fine to very fine grained, subangular, abundant black, occasionally red mineral inclusion, slightly calcareous, tight. CLAYSTONE; light gray to red orange to brown, soft to firm, blocky, occasionally silty in part.
2450-2500	SANDSTONE; light gray to off white, very friable to firm, very fine grained to silty, sub rounded to sub angular, commonly with very fine black and green mineral inclusion, slightly to no calcareous, tight throughout. CLAYSTONE; light gray to red orange continued as above.
2500-2550	CLAYSTONE; light red orange to light brown to light green, soft, blocky, commonly subwaxy, varigated in part. SANDSTONE; distinct decrease amount, continued as above.
2550-2600	SANDSTONE; white to off white to light orange, firm to friable, very fine to lower medium grained, subrounded to subangular, moderately well to poor sorted, abundant black mineral inclusion, trace biotite. tight throughout. CLAYSTONE; continued as above. LIMESTONE, light gray to light brown, hard, blocky, microcrystalline, tight.
2600-2650	CLAYSTONE; red brown to light red orange, firm to soft, blocky, commonly subwaxy, occasionally silty, trace white LIMESTONE stringers. SILTSTONE; light gray to light brown firm to hard, silica in part.



## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
2650-2700	CLAYSTONE; red brown to brown to light gray, firm to soft, commonly silty in part. SILTSTONE; light gray, continued as above.
2700-2750	SANDSTONE; distinct increase amount, light gray to off white, firm, fine to lower medium grained, subrounded to subangular, well sorted and consolidated, predominantly calcareous, abundant varicolored red to black to green mineral inclusion, no visible porosity, no fluorescence stain odor or cut.
2750-2800	CLAYSTONE; light red orange to light red brown, soft to firm, blocky, commonly subwaxy, rarely varigated, trace silty in part. LIMESTONE trace only, light gray, hard microcrystalline, tight.
2800-2850	SANDSTONE; light gray to off white, firm, fine to very fine grained, subrounded to subangular, calcareous in part, occasionally silty in part, tight, no fluorescence stain odor or cut. CLAYSTONE; continued as above.
2850-2900	SANDSTONE; light gray to off white, firm to friable, continued as above, no visible porosity, commonly with varicolored mineral inclusion. CLAYSTONE; red brown to light orange, soft, commonly blocky, subwaxy, occasionally silty in part, trace white microcrystalline LIMESTONE stringers.
2900-2950	SANDSTONE; off white to light green, friable to firm, lower medium to very fine grained, well consolidated, moderately well to poor sorted, calcareous in part, commonly with varicolored red to green to black mineral inclusion, no to poor visible porosity, no fluorescence stain odor or cut. CLAYSTONE; red orange to red brown, continued as above.
2950-3000	Moderate to distinct change, CLAYSTONE; light green, firm, blocky, very calcareous, commonly grading to LIMESTONE. LIMESTONE; light green to white, firm to hard, blocky, micro to fine crystalline, trace soft chalky, occasionally argillaceous in part, tight.
3000-3050	SANDSTONE; milky white to clear, firm to friable, medium to upper medium grained, subrounded to subangular, moderately well sorted, well consolidated, coarse black, red, green mineral inclusion, occasionally very calcareous, trace poor intercrystalline porosity, no fluorescence stain odor or cut.
3050-3100	CLAYSTONE; light gray to green to red orange, soft to firm, occasionally silty in part, trace sandy, trace bright green varigated, trace subwaxy. SANDSTONE; white, continued as above, tight decrease in grained size, no visible porosity, NSOC.
3100-3150	CLAYSTONE; light gray to light green, continued as above, trace varicolored yellow to lavender to bright green, subwaxy, occasionally varigated. LIMESTONE; light brown to light green, firm to hard, blocky, finely crystalline.
3150-3200	CLAYSTONE; varicolored light green to yellow to gray to light orange to tan, soft to firm, blocky, subwaxy, varigated, trace silty to sandy in part, commonly calcareous. LIMESTONE; light green to light gray to white, firm to hard, blocky, microcrystalline, dense tight. SANDSTONE; light green to off white, fine grained, friable, calcareous tight.
3200-3250	CLAYSTONE; predominantly light green, occasionally varicolored, varigated, continued as above. LIMESTONE; white to light brown, hard, blocky, fine to microcrystalline, predominantly dense, trace pyrite, tight throughout.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
3250-3300	LIMESTONE; off white to light brown, very distinct increase amount, hard to firm, blocky, microcrystalline, occasionally with very fine scattered quartz grains, tight throughout, CLAYSTONE; continued as above.
3300-3350	CLAYSTONE; light green to light gray to light brown, firm to soft, blocky, calcareous, occasionally sandy to silty in part. LIMESTONE; continued as above.
3350-3400	SANDSTONE; off white to light gray, firm to hard, fine to lower fine grained, subangular, well consolidated and sorted, slightly calcareous, abundant varicolored mineral inclusion, no visible porosity, no fluorescence stain odor or cut.
3400-3450	SANDSTONE; continued as above, abundant very fine grained to silty, very calcareous, tight throughout. CLAYSTONE; light green to light gray, firm to soft, blocky, occasionally silty, calcareous.
3450-3500	SANDSTONE; light gray, firm to = friable, medium to upper medium grained, moderately well to poor sorted, well consolidated, spotty milky white calcareous inclusion, abundant coarse grained black to dark gray mineral inclusion, occasionally carbonaceous in part, no to poor visible porosity no fluorescence stain odor or cut.
3500-3550	SANDSTONE; light gray to white continued as above, predominantly tight, trace pyritic, tight to poor visible porosity, no fluorescence stain odor or cut. CLAYSTONE; varicolored, green to yellow to gray to brown to orange, soft, subwaxy, commonly varigated, CHERT; trace only, brown semi opaque, trace loose pyrite fragments assoc with thin coal stringers.
3550-3600	SANDSTONE; white to light gray, firm to friable, medium to lower fine grained, subangular to sub rounded, poor to moderately well sorted, abundant black, possible carbonaceous, mineral inclusion, no to poor visible porosity, no fluorescence stain odor or cut. CLAYSTONE, varicolored continued as above
3600-3650	SANDSTONE; continued as above, occasionally black carbonaceous shale parting, tight throughout. CLAYSTONE; varicolored as above.
3650-3700	SANDSTONE; light gray to dirty brown, friable to hard, fine to very fine grained, traces upper medium grained, subangular, well consolidated poor sorted, occasionally silty in part, slightly calcareous, tight NSOC. SILTSTONE; dirty gray to brown, firm, very fine, occasionally with thin black carbonaceous shale parting, tight throughout.
3700-3750	SANDSTONE; continued as above, tight throughout. SHALE; dark gray to gray, firm to soft, platy, subfissile, occasionally black carbonaceous. Siltstone; continued as above.
3750-3800	SANDSTONE; white to light gray, firm to friable, medium to lower medium grained, subrounded, well sorted, slightly calcareous, no to poor visible porosity NSOC. SHALE; dark gray to dark brown, soft to firm, platy, occasionally carbonaceous in part. SILTSTONE; continued as above, predominantly dirty gray to brown, occasionally light green claystone.
3800-3850	SHALE; dark gray to dark brown, firm to soft, commonly thin black carbonaceous stringers, occasionally silty in part. SANDSTONE; light gray to white, firm to hard, S&P, commonly silty, occasionally medium grained, subrounded, tight throughout.
3850-3900	SANDSTONE; light gray to light brown, firm to hard, fine to lower fine grained, subrounded to subangular, poor sorted, well consolidated, occasionally thin black carbonaceous SHALE stringers, tight throughout. SHALE, gray to brown, continued as above.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
3900-3950	SANDSTONE continued as above, general increase grained size to upper to medium grained, abundant carbonaceous debris and occasionally black shale stringers, tight throughout. SHALE; dark gray, platy, subfissile, commonly very fine silty with black carbonaceous stringers.  <b>MESAVERDE 3,940' (+2,702')</b>
3950-4000	NO SAMPLE
4000-4050	SANDSTONE; white to light gray, friable to firm, medium to upper medium grained, subrounded to subangular, moderately well sorted, well consolidated, abundant, black mgr mineral inclusion, occasionally carbonaceous debris, slightly calcareous, predominantly tight with trace poor intercrystalline porosity, no fluorescence stain odor or cut. SHALE; continued as above.
4050-4100	SANDSTONE; continued as above, abundant loose unconsolidated grains, trace silty with black carbonaceous stringers, no visible porosity, no fluorescence stain odor or cut.
4100-4150	SHALE; dark gray to dark brown, firm to soft, commonly silty in part, occasionally black carbonaceous stringers and partings. SANDSTONE; white to light gray, firm to hard, fine grained to silty, occasional black shale partings, tight, commonly as above, occasionally with milky white calcareous matrix, tight throughout.
4150-4200	NO SAMPLE
4200-4250	SHALE; gray to light gray, firm to soft, blocky to platy, occasionally thin black carbonaceous partings, occasionally silty in part trace black carbonaceous. SANDSTONE; light gray to light green; firm, fine grained to silty, occasionally fine black mineral inclusion, slightly calcareous, tight throughout.
4250-4300	SHALE; brown to light gray, continued as above, occasionally variegated, subwaxy, red orange to pink to green. SANDSTONE; light gray to white, firm, fine grained to silty, tight
4300-4350	SHALE; gray to gray green to dark gray, firm to soft, blocky to platy, commonly silty in part, occasionally with fine black carbonaceous stringers, occasionally varicolored, subwaxy, grading to CLAYSTONE. SANDSTONE; off weak to light gray, firm to friable, medium to upper medium grained, subrounded to subangular, abundant coarse black mineral inclusion, occasionally green possible glauconite pellet, white calcareous matrix, tight to poor visible porosity
4350-4400	SHALE; dark gray to dark brown, firm to soft, platy, subfissile, commonly very fine gritty with carbonaceous stringers, trace loose coal. SANDSTONE; continued as above gen decrease in grained size, no visible porosity.
4400-4450	SHALE; dark gray to brown, firm, platy to subblocky, occasionally subfissile with black coal stringers. SANDSTONE; continued as above, occasionally with black shale stringers, occasionally carbonaceous debris.
4450-4500	SHALE dark gray to dark brown, firm to soft, platy to blocky, occasionally silty in part with black carbonaceous stringers, trace coal.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
4500-4550	SHALE, continued as above trace coal stringers. SANDSTONE; light gray to gray, firm, fine grained to silty, occasionally black to gray shale stringers, commonly with fine black inclusion, predominantly calcareous, tight throughout.
4550-4600	SHALE; dark gray to dark brown, firm to soft, commonly with thin black carbonaceous stringers,
4600-4650	SANDSTONE; white, firm to hard, fine to lower medium grained, subangular, moderately well sorted well consolidated, abundant black to green mineral inclusion, commonly calcareous, trace disseminated pyritic, occasionally spotty buff matrix, trace carbonaceous fragment, tight to poor visible porosity, NSOC. SHALE; continued as above.
4650-4700	SANDSTONE; continued as above, no fluorescence stain odor or cut, trace loose coal. SHALE; dark gray to brown, occasionally carbonaceous in part, trace calcareous.
4700-4750	SHALE; dark gray to gray brown, firm, blocky occasionally platy, commonly with black carbonaceous stringers and partings.
4750-4800	SHALE; dark gray to dark brown, firm, blocky, commonly very fine gritty texture with black carbonaceous stringers, occasionally loose COAL.
4800-4850	SANDSTONE; white to light brown firm to hard, lower medium to very fine grained, subrounded to angular, poor sorted, calcareous, tight no fluorescence stain odor or cut. SHALE; dark gray to dark brown, firm, platy to blocky, commonly subfissile, commonly fine gritty texture with thin carbonaceous stringers, trace COAL.
4850-4900	SANDSTONE; white to light brown, firm to friable, fine to lower fine grained, subrounded, well sorted and consolidated, no to poor visible porosity, predominantly calcareous, trace black carbonaceous SHALE partings, trace loose COAL. SHALE; continued as above.
4900-4950	SANDSTONE; light brown to off white, friable, fine to lower fine grained, moderately well sorted, poor consolidated, trace disseminated COAL and black shale partings, no visible porosity no fluorescence stain odor or cut
4950-5000	SANDSTONE; continued as above, predominantly friable, trace brown possible dead oil stain, trace Coal, NFOC
5000-5050	SHALE; dark gray to dark brown, firm, blocky to platy, occasionally black carbonaceous and coal stringers. SANDSTONE; white to light brown continued as above, abundant loose COAL, trace poor intergranular porosity no fluorescence stain odor or cut.
5050-5100	SHALE; dark gray to black, firm, blocky to platy, commonly gritty texture, carbonaceous in part. COAL; black, brittle, vitreous, commonly ass with shale.
5100-5150	SHALE; dark gray to dark brown continued as above, commonly with thin black carbonaceous stringers, trace loose COAL.
5150-5200	SHALE; dark gray to dark brown, firm, subplaty, commonly with black carbonaceous stringers, occasionally fine gritty to silty texture. COAL; black brittle vitreous.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
5200-5250	SHALE; dark brown to dark gray, firm, blocky, fine silty texture, carbonaceous in part, trace coal stringers. SANDSTONE; white to light brown, firm to friable, fine grained to lower fine grained, calcareous, occasionally carbonaceous inclusion, tight throughout. COAL, trace only.
5250-5300	COAL; black vitreous, brittle. SHALE; dark brown to dark gray, firm, commonly with carbonaceous stringers. SANDSTONE; continued as above no visible porosity, no fluorescence stain odor or cut.
5300-5350	SANDSTONE; white, firm to friable, fine to lower medium grained, subrounded to subangular, occasionally black shale partings, rarely with thin coal stringers, no to poor visible porosity. SHALE; continued as above.
5350-5400	SHALE; dark gray to dark brown, firm, occasionally splintery fissile, occasionally thin carbonaceous stringers, trace loose COAL. SANDSTONE; continued as above, decrease amount.
5400-5450	SHALE; gray to dark gray continued as above, commonly light gray very silty, silica in part,
5450-5500	SILTSTONE; light gray to gray, soft, occasionally very fine sandy, argillaceous throughout, trace loose COAL.
5500-5550	SHALE; gray to dark gray, firm, subblocky, commonly very fine silty gritty texture, occasionally black carbonaceous, occasionally loose coal. SILTSTONE, continued as above.
5550-5600	SHALE; dark gray to dark brown, soft to firm, blocky to platy, occasionally carbonaceous, trace black carbonaceous stringers.
5600-5650	SHALE; dark gray to very dark brown, continued as above.
	<b>CASTLEGATE 5645' (+997')</b>
5650-5700	SANDSTONE; light gray to off white, firm occasionally hard, fine to lower medium grained, subangular to sub rounded, abundant dark gray to black mineral inclusion, non calcareous, silica in part, trace carbonaceous inclusion, no visible porosity no fluorescence stain odor or cut
5700-5750	SANDSTONE; white to light gray, commonly unconsolidated to smooth friable clusters, fine to lower medium grained, sub rounded to sub angular, abundant black mineral inclusion, trace green to red orange inclusion, rarely pyrite, no visible porosity, no fluorescence stain odor or cut
5750-5800	SANDSTONE; white to light gray continued as above, decrease grained size to lower fine grained, trace loose COAL, no visible porosity, no fluorescence stain odor or cut
5800-5850	SHALE; dark gray to brown, firm, subblocky, commonly fine gritty texture, occasionally silty in part, trace carbonaceous, rarely pyritic. SANDSTONE; continued as above, no fluorescence stain odor or cut, trace gray semi opaque CHERT.
5850-5900	SHALE; dark gray, firm, subblocky, trace carbonaceous. SANDSTONE; light to dirty gray, firm, fine to lower fine grained, occasionally silty in part, poor sorted, trace glauconite.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
5900-5950	SHALE; dark gray to very dark brown, firm, subblocky, carbonaceous in part.
5950-6000	SHALE; dark gray to dark brown, firm to soft, subblocky, occasionally with fine carbonaceous inclusion and stringers trace black very carbonaceous.
<b>MANCOS 5,988' (+654')</b>	
6000-6050	SHALE; dark gray to very dark brown, firm to soft, platy to blocky, trace subfissile, commonly with very fine black carbonaceous inclusion.
6050-6100	SHALE; dark gray to brown, soft to firm, commonly subblocky with very fine gritty texture, silty in part, slightly calcareous, occasionally very fine carbonaceous inclusion and stringers.
6100-6150	SHALE; dark gray to dark brown, continued as above, occasionally carbonaceous in part.
6150-6200	SHALE; dark gray to dark brown, firm, blocky to subblocky, consolidated very fine silty with gritty texture, calcareous in part, occasionally micro carbonaceous inclusion.
6200-6250	SHALE; brown to dark gray, soft, subblocky, predominantly very fine silty, trace white calcareous stringer, commonly with scattered very fine black carbonaceous inclusion.
6250-6300	SHALE; dark brown to gray, soft, subblocky, predominantly very fine mottled, gritty texture, predominantly calcareous in part, commonly silty in part, occasionally very fine black carbonaceous inclusion.
6300-6350	SHALE; dark brown to dark gray continued as above, commonly appears black when dry.
6350-6400	SHALE; dark gray to brown, soft to firm, fine gritty to silty texture. commonly with fine black carbonaceous inclusion, calcareous in part.
6400-6450	SHALE; continued as above.
6450-6500	Shale; dark gray to dark brown, soft, subblocky, commonly with fine black carbonaceous inclusion, occasionally white sandy stringers, occasionally silty in part.
6500-6550	SHALE; dark gray to dark brown, soft, fine gritty texture occasionally silty in part, calcareous, fine black carbonaceous inclusion, trace white SANDSTONE clusters.
6550-6600	SHALE; continued as above, trace varigated black to green stringers, trace light green waxy. SANDSTONE; light gray to white, firm to hard lower fine to fine grained, sub rounded to subangular, calcareous. moderately well to poor sorted, commonly with black to brown shale partings, tight, no fluorescence stain odor or cut.
6600-6650	SHALE; dark brown to gray, soft, subblocky, fine carbonaceous inclusion, commonly very silty, trace black carbonaceous stringers, calcareous. SANDSTONE; dirty brown to gray to white, friable to firm, fine grained to silty, well consolidated, poor sorted, occasionally shale partings, no visible porosity, no fluorescence stain odor or cut.
6650-6700	SHALE; continued as above, trace light green, platy soft, waxy. SANDSTONE; dirty brown to white to gray, firm, fine grained to silty, occasionally assoc with SHALE, calcareous, no visible porosity, no fluorescence stain odor or cut.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
6700-6750;	SANDSTONE; dirty brown to white to light gray, hard to firm, fine grained to silty, poor sorted, commonly with shale partings and stringers, abundant black mineral inclusion, trace glauconite, slightly calcareous, tight throughout. SHALE; dark gray to dark brown, commonly silty, continued as above.
6750-6800	SHALE; continued as above, abundant cavings. SANDSTONE; white to light gray, hard, platy, fine grained to silty, commonly assoc with dark gray SHALE: red to green to black mineral inclusion, slightly calcareous, tight throughout.
6800-6850	SANDSTONE; white to light gray, firm to hard, fine grained to silty, subangular to sub rounded, black mineral inclusion, abundant dark gray SHALE partings and stringers, tight throughout no fluorescence stain odor or cut. SHALE; dark gray to dark brown to black, firm to soft, platy, trace carbonaceous.
6850-6900	SANDSTONE; white to dirty gray, tight, predominantly assoc with SHALE, continued as above. SHALE; dark gray to dark brown, firm, subblocky, commonly with fine gritty texture, calcareous in part, commonly assoc with platy SANDSTONE stringers, occasionally very fine black carbonaceous inclusion.
6900-6950	SANDSTONE; white to light gray, firm to hard, fine grained, subangular to sub rounded, well commonly, moderately well sorted, slightly calcareous, predominantly with fine black mineral inclusion, abundant dark brown shale parting and stringers, tight throughout no fluorescence stain odor or cut. SHALE; dark gray to dark brown, firm, fine gritty texture, occasionally fine black carbonaceous inclusion, slightly to non calcareous, commonly assoc with SANDSTONE.
6950-7000	SANDSTONE; white to light gray, abundant SHALE parting and stringers, continued as above, tight throughout. SHALE; dark gray to dark brown, firm, subblocky to platy, occasionally black carbonaceous inclusion, trace carbonaceous stringers, slightly calcareous, rarely varicolored.
7000-7050	SHALE; dark gray to dark brown, firm to soft, subblocky to platy, occasionally fissile in part, commonly with micro black carbonaceous inclusion, trace only silty to sandy.
7050-7100	SHALE; dark gray to dark brown, soft, subblocky to platy, fine to micro gritty texture, abundant micro black carbonaceous inclusion, occasionally calcareous in part.
7100-7150	SHALE; continued as above, trace silty to sandy.
7150-7200	SHALE; dark gray to dark brown, soft to firm, subblocky, occasionally platy, trace fissile, predominantly with fine to micro black carbonaceous inclusion.
7200-7250	SHALE; dark gray to dark brown, firm, platy to subblocky, trace subfissile, occasionally micro carbonaceous inclusion.
7250-7300	SHALE; dark gray to dark brown, soft to firm, subblocky, occasionally fine gritty texture with micro carbonaceous inclusion.
7300-7350	SHALE; dark brown to dark gray, subblocky with fine gritty texture, occasionally micro carbonaceous inclusion, slightly calcareous.
7350-7400	SHALE; dark gray to dark brown, firm to soft, subblocky, occasionally very fine gritty texture, micro carbonaceous inclusion.
7400-7450	SHALE; dark gray to brown, continued as above, occasionally slightly calcareous.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
7450-7500	SHALE; dark gray to brown, firm to soft, subblocky to platy, commonly with black micro carbonaceous inclusion, trace silty. trace carbonaceous stringers.
7500-7550	SHALE; dark gray to brown tracer thin white silty stringers, occasionally fine angular carbonaceous inclusion.
7550-7600	SHALE; dark brown to dark gray, firm to soft, subblocky occasionally platy, commonly . very fine gritty texture, commonly silty in part, commonly with micro carbonaceous inclusion, occasionally slightly calcareous.
7600-7650	SHALE; dark gray to dark brown, firm, subblocky, commonly with fine gritty to silty texture, occasionally thin white SLSTS stringers, micro carbonaceous inclusion, calcareous in part, trace light green, subwaxy.
7650-7700	SHALE; dark gray to dark brown, firm to soft, subblocky, trace fissile with thin black carbonaceous stringers, rarely silty in part.
7700-7750	SHALE; dark gray to dark brown, soft to firm, subblocky, very fine gritty texture, abundant micro black carbonaceous inclusion, occasionally calcareous.
7750-7800	SHALE; dark gray to dark brown soft to firm, subblocky, occasionally micro carbonaceous inclusion and very fine carbonaceous stringers, rarely silty in part.
7800-7850	SHALE; dark gray to dark brown, soft, subblocky occasionally platy, commonly with fine gritty texture, micro carbonaceous inclusion and stringers, slightly calcareous.
7850-7900	SHALE; dark gray to black continued as above.
7900-7950	SHALE; dark gray to dark brown, soft, subblocky, occasionally platy, fine gritty texture, micro carbonaceous inclusion, trace black carbonaceous stringers.
7950-8000	SHALE; dark gray to dark brown, soft to firm, blocky to subblocky, micro gritty texture, occasionally micro carbonaceous inclusion and stringers.
8000-8050	SHALE; dark gray to dark brown, firm to soft, subblocky, fine gritty texture occasionally very fine silty in part, micro black carbonaceous inclusion, trace silty, calcareous.
8050-8100	SHALE; continued as above
8100-8150	SHALE; dark gray to dark brown, soft to firm , subblocky to platy, predominantly with micro carbonaceous inclusion and very fine black carbonaceous stringers, fine gritty texture, occasionally calcareous in part, rarely with very fine silty stringers.
8150-8200	SHALE; dark gray to dark brown, soft to firm, subblocky, commonly with very fine carbonaceous flakes, abundant micro black carbonaceous inclusion and stringers, very fine gritty texture.
8200-8250	Shale; dark gray to dark brown, soft, subblocky, micro carbonaceous inclusion, rarely trace loose milky white calcite, possible fracture fill.



## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
8250-8300	SHALE; dark gray to dark brown, soft, subblocky, micro carbonaceous inclusion, occasionally black carbonaceous stringers, rarely with thin dirty brown to white, calcite partings.
8300-8350	SHALE; dark gray to dark brown, soft to firm, predominantly with fine to micro carbonaceous inclusion and stringers rarely silty in part.
8350-8400	SHALE; continued as above, occasionally fissile with thin black carbonaceous stringers, rarely shell fragments variety Inoceramous.
8400-8450	SHALE; dark gray to black, firm to soft, platy to subblocky, fine to micro carbonaceous inclusion, trace Inoceramous fragments, trace black carbonaceous stringers.
8450-8500	SHALE; continued as above with trace fossil fragment as above.
8500-8550	SHALE; gray to dark gray, firm to soft, subblocky, predominantly with micro carbonaceous inclusion and stringers, calcareous in part.
8550-8600	SHALE; continued as above, calcareous trace Inoceramous.
8600-8650	SHALE; dark gray to dark brown, firm to soft, platy to subblocky, fine gritty texture, micro carbonaceous stringer and inclusion, trace loose white calcite, trace white silty stringers.
8650-8700	SHALE; gray to dark gray, soft to firm, fine gritty texture, silty in part abundant micro to fine black carbonaceous inclusion occasionally micro carbonaceous stringers.
8700-8750	SHALE; dark gray to dark brown, continued as above, occasionally fine white silty to sandy stringers. BENTONITE; trace only, light gray to light brown, soft, platy, fluorescence.
8750-8800	SHALE; dark gray to dark brown, soft to firm, fine gritty to silty texture, occasionally silty to sandy, occasionally white SILTSTONE stringers trace BENTONITE, light gray fluorescence
8800-8850	SHALE: dark gray to dark brown, soft to firm, subblocky, fine to micro carbonaceous inclusion and stringers, occasionally silty, calcareous.
8850-8900	SHALE; gray to dark gray, soft to firm, fine gritty texture, silty in part, carbonaceous in part, trace light gray siltstone stringers.
8900-8950	SHALE; continued as above, occasionally slightly calcareous, trace silty in part.
8950-9000	SHALE; dark gray to dark brown, firm to soft, subblocky, predominantly with fine gritty texture. trace thin white SILTSTONE to SANDSTONE stringers and micro carbonaceous inclusions, occasionally coarse, platy, carbonaceous flakes, trace black stringers.
9000-9050	SHALE; dark to brown soft, platy to blocky, fine to micro carbonaceous inclusion, trace silty stringers.
9050-9100	SHALE; continued as above, commonly with coarse gritty texture with white calcareous and light green mineral inclusion trace white calcareous fossil fragments, trace loose pyrite. BENTONITE; white to light green, very soft, subwaxy, platy, fluorescent.
9100-9150	SHALE; gray to brown, soft, subblocky, predominately with gritty texture, occasionally micro carbonaceous inclusion, commonly silty to sandy in part, rarely BENTONITE as above.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
9150-9200 S	HALE; gray to brown, soft to firm, very fine mottled gritty texture, occasionally micro carbonaceous inclusion, trace thin SILTSTONE stringers.
9200-9250	SHALE; dark gray to dark brown, soft to firm, subblocky, fine to micro carbonaceous inclusion, trace black carbonaceous stringers, rarely BENTONITE.
9250-9300	SHALE; dark gray to dark brown, continued as above, commonly carbonaceous in part, trace thin silty stringers.
9300-9350	SHALE; SHALE; dark gray to dark brown to black, soft to firm, subblocky, occasionally fine gritty texture, trace fissile, commonly carbonaceous in part.
9350-9400	SH: dark gray to dl brown to black, soft, subblocky, occasionally fissile trace thin pyrite stringers, predominantly carbonaceous.
9400-9450	SHALE; dark gray to black to dark brown, firm, subblocky, occasionally fissile in part, commonly with fine black carbonaceous stringers and smooth platy inclusion, rarely silty.
9450-9500	SHALE; continued as above, predominantly blocky carbonaceous.
9500-9550	SHALE; black to = dark gray, firm to soft, platy to subblocky, occasionally fissile, carbonaceous throughout, rarely Inoceramous fragment.
9550-9580	SHALE; continued as above, very carbonaceous, occasionally . SANDSTONE stringers. SANDSTONE; light gray to dirty brown, firm to hard, subangular to sub rounded, fine to lower medium grained, poor sorted, well consolidated, abundant SHALE parting and stringers, calcareous, no visible porosity, no fluorescence stain odor or cut.
9580-9620	SHALE; black to dark gray firm to soft, platy to subblocky, trace fissile very splintery, predominantly carbonaceous, occasionally SANDSTONE parting and stringer. SANDSTONE, dirty brown, hard, fine to medium grained, subangular, poorly sorted, calcareous, occasionally very fine fossil fragments trace black to green mineral inclusion, occasionally scattered carbonaceous flakes, calcareous, tight throughout, no fluorescence stain odor or cut.
9620-9660	SHALE; black to dark gray, continued as above, occasionally tight SANDSTONE and SILTSTONE stringers, predominantly carbonaceous. SANDSTONE; dirty brown to light gray, poor sorted, predominantly assoc with black SHALE, tight throughout no fluorescence stain odor or cut.
9660-9680	SANDSTONE; dirty brown, hard, fine grained to silty, subrounded occasionally subangular, commonly argillaceous, moderately well sorted, well consolidated, occasionally light green clay fill, dark gray mineral inclusion, trace disseminated pyrite tight throughout. SHALE; continued as above.
<b>DAKOTA SILT 9,676' (-3034')</b>	
9680-9700	SANDSTONE; dirty gray to dirty brown, hard, fine to lower medium grained to silty, poor sorted, well consolidated, very argillaceous with scattered light green clay fill, abundant SHALE partings and inclusion, no visible porosity no fluorescence stain odor or cut. SHALE; dark gray to black, firm, subblocky, commonly carbonaceous, commonly sandy in part, trace BENTONITE.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
<b>DAKOTA MARKER 9,728' (-3086')</b>	
9700-9720	SHALE; dirty gray, to black, firm, predominantly very sandy with scattered moderately well rounded quartz, occasionally green clay inclusion, commonly grading to argillaceous SANDSTONE, carbonaceous in part.
9720-9740	SHALE; dark gray to black, firm, subblocky, commonly silty in part, trace coal, occasionally sandy. SANDSTONE; dirty gray, silty, argillaceous tight, trace light green clay fill. Bentonite; distinct increase, white platy soft, fluorescent.
9740-9760	SHALE; dark gray to black, firm, subblocky, occasionally very carbonaceous trace loose COAL, occasionally floating quartz grains, occasionally silty with micro green mineral inclusion. BENTONITE; continued as above.
9760-9780	SHALE; dark gray to black, continued as above, trace coal fragments, very tight, occasionally with scattered medium grained quartz grains. SANDSTONE; very dirty gray to brown, hard, fine to lower medium grained, subrounded, very argillaceous with black SHALE stringers and parting, slightly calcareous, very tight.
<b>DAKOTA SANDSTONE 9,760' (-3,118')</b>	
9780-9800	SANDSTONE; dirty gray to light gray, hard, fine grained to silty, predominantly argillaceous with shale partings and stringers, commonly with sharp angular broken grains, very tight, no fluorescence stain odor or cut. SHALE, dark gray to black, carbonaceous continued as above, trace BENTONITE.
9800-9820	SHALE; dark gray to black, firm, platy to blocky, predominantly carbonaceous, trace loose coal. SANDSTONE; dirty gray to brown, hard silty to lower medium grained, poor sorted, argillaceous, tight.
9820-9840	SANDSTONE; gray to light gray to dirty brown, hard, fine grained, subangular, argillaceous in part, slightly calcareous, occasionally black shale parting, trace disseminated pyrite, tight throughout, no fluorescence stain odor or cut.
9840-9860	SANDSTONE; Distinct increase in amount, light gray to off white, very hard, fine grained, subangular, silica, moderately well sorted well consolidated, very tight, no fluorescence stain odor or cut. SHALE; black continued as above.
9860-9880	SANDSTONE; off white to light gray, hard, fine grained to lower medium grained, subrounded to subangular, predominantly silica with occasionally chert matrix, trace slightly calcareous matrix, tight, no fluorescence stain odor or cut
9880-9900	SHALE; dark gray to black, firm to hard, blocky, predominantly carbonaceous, trace loose COAL, SANDSTONE; continued as above, tight, silica, no fluorescence stain odor or cut
9900-9920	SHALE; black to dark gray, firm to hard, subblocky carbonaceous, trace loose pyrite, rarely COAL.
<b>CEDAR MOUNTAIN 9,879' (-3,327')</b>	

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
9920-9940	SANDSTONE; white to clear, friable to firm , commonly unconsolidated, medium to lower coarse grained, subrounded, moderately well sorted, predominantly silica matrix trace poor intergranular porosity, trace chert fragment, no fluorescence stain odor or cut. BENTONITE.
<b>BUCKHORN CONGLOMERATE 9,903' (-3,261')</b>	
9940-9960	CONGLOMERATE; predominantly sharp semi opaque gray to white to brown, sharp, CHERT fragments
9960-9980	CONGLOMERATE; continued as above, predominantly light gray to greenish semi opaque CHERT fragments. LIMESTONE; white to light brown, hard, blocky, microcrystalline, dense, tight
<b>MORRISON 9,946' (-3,304')</b>	
9980-10000	LIMESTONE; milky white to white; firm, blocky, micro to cryptocrystalline, predominantly very sandy with abundant fine grained subangular quartz, tight throughout.
10000-10020	SHALE; very distinct change, varicolored, red brown to gray to green, soft to firm, subblocky to platy, subwaxy, occasionally fine silty.
10020-10040	SHALE; light green, platy, soft, silica, trace only as above.
10040-10060	SANDSTONE; white to milky white, firm to hard, silica, fine to medium grained, subangular, grading to orthoquartzite, abundant bitumen flour, very tight throughout.
10060-10080	CLAYSTONE; light green to off white, firm, platy, subwaxy, commonly with scattered quartz grains, trace soft, chalky in part. SHALE: dark gray to black to red brown, platy, trace fissile very carbonaceous. SANDSTONE; continued as above.
10080-10100	CLAYSTONE; light green, continued as above, occasionally earthy texture occasionally silty in part. SHALE; dark gray to black to red brown, platy subfissile, occasionally very carbonaceous, abundant bitumen flour.
10100-10120	SHALE; varicolored, red brown to brown to gray to green, firm, platy, trace black, carbonaceous. CLAYSTONE; light green, soft to firm, subwaxy, continued as above.
10120-10140	SHALE; varicolored red brown to light brown to dark gray, firm to soft, platy, occasionally silty in part, trace black fissile carbonaceous. CLAYSTONE. green to light green, blocky, subwaxy, occasionally scattered quartz grains. BENTONITE; light gray, soft, platy, commonly with brown mineral inclusions
10140-10160	SHALE; red brown to brown to gray to black, continued as above.
10160-10180	SHALE; varicolored, continued as above, moderately distinct increase black, fissile to subfissile, very carbonaceous. CLAYSTONE; light green to light gray to red brown, firm to soft, subblocky, occasionally subwaxy, splintery, trace white SANDSTONE stringers
10180-10200	CLAYSTONE; green to light green to light gray, soft to firm, subblocky, occasionally with thin brown LIMESTONE stringers rarely with white calcareous inclusion. SHALE; varicolored, brown to red brown to black, soft, platy, occasionally fissile, carbonaceous.

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
10200-10240	CLAYSTONE; light green to green to white, firm to soft, commonly very sandy. SHALE; red orange to red brown to gray, soft to firm, platy, occasionally fissile, trace black carbonaceous.
10240-10280	SHALE; black to dark gray to brown, soft to firm, platy, subfissile, commonly carbonaceous, occasionally thin SANDSTONE stringers. CLAYSTONE; continued as above. SANDSTONE; white to clear, fine to medium grained, subangular, silica, commonly assoc with CLAYSTONE, very tight.
10280-10300	CLAYSTONE; light green to green to white, soft to firm, platy trace splintery, abundant sand grains throughout, trace milky white, soft chalky. SHALE; continued as above. SANDSTONE; white to clear, clean, very tight, commonly assoc with CLAYSTONE continued as above.
10300-10320	SANDSTONE; milky white to white to clear, firm to friable, fine grained, subangular, commonly platy, silica, tight. CLAYSTONE; continued as above.
10320-10340	CLAYSTONE; green to light green, soft, subwaxy, commonly silty in part. SHALE; red orange to red brown to gray to green, soft to firm, platy, commonly with white silty to sandy stringers, occasionally black fissile very carbonaceous, occasionally red orange limonite partings.
10340-10360	SHALE; varicolored, black to brown to red brown to red orange, soft to firm, platy, abundant fissile. splintery, carbonaceous. CLYSY; continued as above.
10360-10380	CLAYSTONE; light green to gray to brown, firm, subwaxy, occasionally silty in part. SHALE; as above.
10380-10400	Very distinct change, bright red orange, subblocky, firm, occasionally fine gritty to silty texture, occasional light green CLAYSTONE.
10400-10420	SHALE; bright red orange to red brown, continued as above, occasionally black splintery carbonaceous.
10420-10440	SHALE, continued as above. CLAYSTONE; light green to gray to white, soft, subblocky, occasionally very fine silty, rarely sandy in part, slightly calcareous.
10440-10480	CLAYSTONE; light green to off white, soft, subblocky, occasionally sandy in part, slightly calcareous, trace splintery. SHALE; red orange to brown to black, firm, subfissile, occasionally black, carbonaceous.

### SUMMERVILLE 10,472' (-3,830')

10480-10500	Distinct change, SHALE; red orange to red brown, soft, subblocky, fine gritty to silty texture, slightly calcareous.
10500-10520	SHALE; red orange to red brown, occasionally light orange, soft, subblocky, fine gritty to silty texture, slightly calcareous. CLAYSTONE, light green to white, soft, splintery, subwaxy. SANDSTONE trace only, light gray, medium to lower coarse grained, subrounded associated with SHALE.
10520-10540	LIMESTONE; brown to light brown, firm to hard, blocky, fine to microcrystalline, occasionally mottled argillaceous in part, tight throughout. CLAYSTONE; green to gray green, firm, blocky, slightly calcareous.

## SAMPLE DESCRIPTIONS

### DEPTH

### LITHOLOGY

#### **CURTIS 10,528' (-3,886')**

- 10540-10560 SANDSTONE; white to milky white, hard to firm, very fine grained to fine grained, subangular, well consolidated, commonly with milky white silica cement, trace slightly calcareous, tight throughout. SHALE; black to dark gray firm, platy, splintery, carbonaceous. CLAYSTONE; continued as above.
- 10560-10580 SANDSTONE; milky white to white to light gray, very clean, hard, very fine grained, subangular, well sorted and consolidated, milky white silica matrix, occasionally loose milky white matrix material, tight throughout, no fluorescence stain odor or cut. SHALE; black carbonaceous continued as above.
- 10580-10600 SHALE; varicolored. red brown to red orange to light green to black, firm, platy, subfissile, commonly carbonaceous, trace brown, calcareous. SANDSTONE; continued as above, tight throughout, rarely with disseminated pyrite.
- 10600-10620 SHALE; gray to dark gray to black, firm platy, predominantly carbonaceous. CLAYSTONE; light green to red brown, firm subblocky, occasionally subwaxy, calcareous in part. LIMESTONE; dirty brown earthy texture, blocky. SANDSTONE; light pink to orange, firm, fine grained to silty, calcareous, trace coal partings, trace pyrite, tight.

#### **ENTRADA, SLICK ROCK MEMBER 10,610' (-3,968')**

- 10620-10640 SANDSTONE; buff to off white to orange, friable to firm, lower medium to very fine grained, subangular to well rounded, poor sorted, well consolidated, commonly with chalky milky white calcareous matrix, no visible porosity no fluorescence stain odor or cut. SHALE; varicolored continued as above.
- 10640-10650 SANDSTONE; unconsolidated, very light orange, translucent, subrounded, fine grained, loose quartz grains, no fluorescence stain odor or cut, abundant milky white, soft, flaky, chalky, probable matrix material, occasionally slightly calcareous. predominantly siliceous.
- 10650-10660 SHALE; dark gray to black, firm, platy, subfissile, predominantly carbonaceous. SANDSTONE; continued as above, occasionally very well rounded frost quartz grains.
- 10660-10680 SANDSTONE; white to very light orange, friable, fine to very fine grained, subangular to rounded, moderately well sorted, abundant loose fine grained very light orange to clear quartz grains, abundant loose milky white, chalky, silica, matrix material, no fluorescence stain odor or cut. SHALE; dark gray to black continued as above, occasionally varicolored brown to light green.
- 10680-10700 SANDSTONE; unconsolidated clear to very light orange subrounded, fine to lower medium grained quartz grains, occasionally very well rounded, frost, abundant loose white chalky non calcareous matrix material, no fluorescence stain odor or cut. SHALE; continued as above.
- 10700-10710 SANDSTONE; clear to very light orange, translucent, fine grained, sub rounded to very well rounded, predominantly unconsolidated, abundant white, chalky, silica matrix material, CLAYSTONE; light green, platy, occasionally splintery, subwaxy.

## SAMPLE DESCRIPTIONS

### DEPTH

### LITHOLOGY

10710-10720

SHALE; black to dark red brown to gray to green, firm to soft, commonly subwaxy, abundant fissile very carbonaceous. SANDSTONE; predominantly unconsolidated, continued as above, trace dirty gray, medium grained, angular, with black inclusion, no fluorescence stain odor or cut.

#### **CARMEL 10,726' (-4,084')**

10720-10730 SANDSTONE; unconsolidated, clear to very light orange to brown, trace frost, sub rounded to very well rounded, quartz grains, no fluorescence stain odor or cut, trace light green mineral inclusion, abundant black, very carbonaceous SHALE.

10730-10740 SANDSTONE; predominantly loose, milky white, flaky, chalky, silica, occasionally very slightly calcareous probable matrix material, occasionally unconsolidated, clear, well rounded quartz grains, no fluorescence stain odor or cut. SHALE; black, blocky to platy, fissile, very carbonaceous.

10740-10750 Very distinct change, SHALE: red orange to red brown, soft, platy, fine gritty texture, occasionally subwaxy, trace white anhydrite stringers, slightly calcareous.

10750-10760 SHALE; black to dark gray to red brown, firm, platy to blocky, subfissile, predominantly carbonaceous, abundant red orange continued as above.

10760-10780 SHALE; red brown, firm to soft, subblocky, commonly fine gritty to silty, trace sandy in part, rarely varigated.

10780-10790 SHALE; red orange to red brown, continued as above, occasionally black, fissile, carbonaceous, abundant calcareous, trace gray green, waxy, rarely varigated.

10790-10800

LIMESTONE; light brown to light gray, firm to soft, subblocky, fine to microcrystalline, commonly with dull earthy texture, tight. SHALE; red brown to orange continued as above, occasionally mottled texture with light brown angular LIMESTONE inclusion, rarely sandy in part.

#### **NAVAJO 10,784' (-4,142')**

10800-10810 SANDSTONE; distinct change in samples, light brown to light gray firm to friable, medium to upper medium grained, subrounded, moderately well sorted, poor consolidated, occasionally with fair intergranular porosity, occasionally loose coarse grained grains, no fluorescence stain odor or cut. SHALE; red orange, continued as above.

10810-10830 SANDSTONE; white to light gray to very light brown, firm to friable, fine grained, subrounded to subangular, occasionally scattered well rounded grains, well sorted and consolidated, silica cement, abundant loose, milky white, chalky, silica, matrix material. no to poor visible porosity, no fluorescence stain odor or cut

10830-10850

SANDSTONE; white to clear to light gray, friable to firm, fine grained, subangular with occasionally well rounded grains, well sorted and consolidated, occasionally unconsolidated grains, silica, trace slightly calcite cement, no visible porosity, no fluorescence stain odor or cut

## SAMPLE DESCRIPTIONS

DEPTH	LITHOLOGY
10850-10870	SANDSTONE; white to clear, clean, fine to very fine grained, subangular to subrounded, well sorted and consolidated, silica, trace very fine disseminated pyrite, abundant loose milky white matrix material, rarely loose coarse grained well rounded frosted quartz grains, no to poor visible porosity, no fluorescence stain odor or cut
10870-10890	SANDSTONE; white, clean, firm occasionally friable, fine grained, subrounded to subangular, well sorted and consolidated, silica, occasionally disseminated pyrite, abundant loose milky white, chalky matrix material, no visible porosity no fluorescence stain odor or cut.
10890-10910	SANDSTONE; continued as above, predominantly silica with occasionally slightly calcareous matrix, trace pyrite, tight throughout no fluorescence stain odor or cut. SHALE; black, firm, platy, subfissile to fissile, very carbonaceous.
10910-10920	SANDSTONE; white to milky white, firm to friable, fine grained, subangular to subrounded, well sorted and consolidated, trace red orange, predominantly silica, abundant loose white soft chalky, no visible porosity, no fluorescence stain odor or cut

### **KAYENTA 10,900' (- 4,258')**

10920-10950	SILTSTONE; bright orange, soft, friable, very fine, occasionally very fine sandy in part, commonly grading to silty CLAYSTONE. tight throughout, trace calcareous in part.
10950-10970	SANDSTONE; light gray to white to light brown, friable to firm fine to lower medium grained, well rounded to sub rounded, moderately well to poor sorted, well consolidated, trace light red orange, silty, no visible porosity no fluorescence stain odor or cut. SILTSTONE; bright orange continued as above.
10970-10990	SANDSTONE; continued as above, occasionally light green. trace light green to red orange CLAYSTONE parting, no visible porosity no fluorescence stain odor or cut. SHALE; black to dark gray, firm to soft, platy to blocky, subfissile predominantly very carbonaceous. SILTSTONE; red orange to orange, continued as above.
10990-11010	SANDSTONE; light gray, friable to firm. fine to medium grained, subangular to subrounded, well sorted and consolidated, tight. SHALE; dark gray to black, firm, blocky, subfissile to fissile, predominantly carbonaceous, occasionally red brown argillaceous. CLAYSTONE; light green to gray, firm, blocky, subwaxy, occasionally silty.
11010-11020	SHALE; dark gray to black to red brown to gray green, firm, blocky to platy, predominantly subfissile, carbonaceous, occasionally varicolored, subwaxy. SANDSTONE; light gray to white, friable to firm, fine to lower medium grained, subrounded occasionally well rounded, no to poor visible porosity, no fluorescence stain odor or cut.

### **WINGATE 11,008' (-4,366')**

11020-11040	SANDSTONE; milky white to white, clean, fine grained to silty. subangular, moderately well sorted and consolidated, abundant milky white, chalky material, no visible porosity no fluorescence stain odor or cut
-------------	--

***TD at 11,040' at 22:52 8/11/2007***



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47794
2. NAME OF OPERATOR: Summit Operating, LLC	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1441 W. Ute Blvd. Ste 280 CITY Park City STATE UT ZIP 84098	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: (435) 940-9001	8. WELL NAME and NUMBER: State 8-32-13-22
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1838' FNL & 476' FEL (SE/4NE/4)	9. API NUMBER: 4304737521
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 32 13S 22E	10. FIELD AND POOL, OR WILDCAT: Wildcat

COUNTY: Uintah

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: request for Wildcat Status
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Summit Operating, LLC is requesting that the State 8-32-13-22 well be placed in wildcat status for tax purposes. There are no wells (producing or otherwise) within a 1 mile radius of the well. The State 8-32-13-22 is producing out of the Entrada-Slick Rock Member. I have enclosed a plat showing the well with a 1 mile radius. There are 2 proposed wells within the 1 mile radius, but no completed or producing wells.

COPY SENT TO OPERATOR

Date: 3.5.2009

Initials: KS

NAME (PLEASE PRINT) Kristi Higgs	TITLE Operations
SIGNATURE Kristi Higgs	DATE 02/25/2009

(This space for State use only) APPROVED BY THE STATE

OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 3/4/09

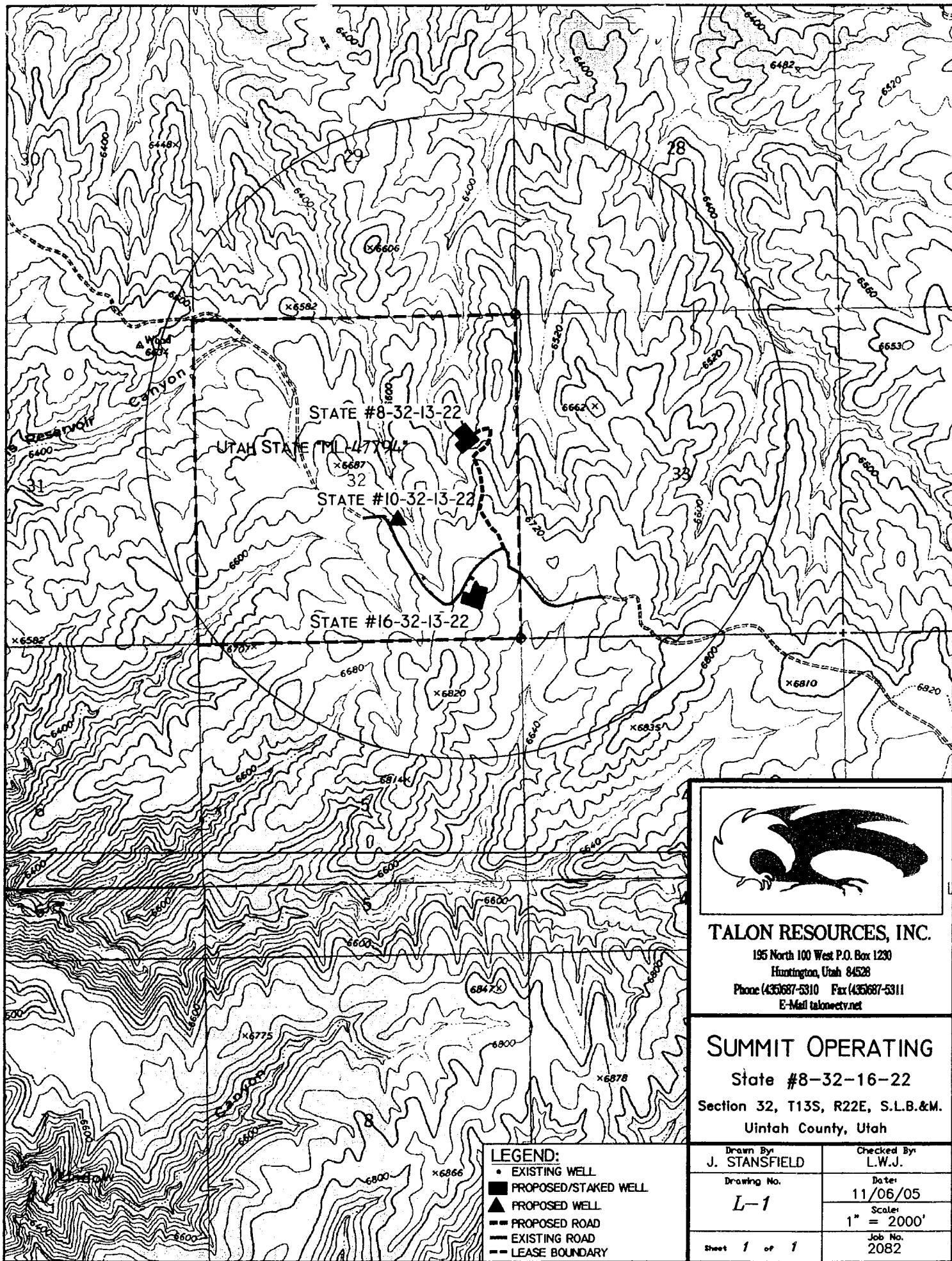
BY: [Signature] (See Instructions on Reverse Side)

A see attached Statement of Basis

RECEIVED

MAR 02 2009

DIV. OF OIL, GAS & MINING



## TALON RESOURCES, INC.

195 North 100 West P.O. Box 1230

Huntington, Utah 84528

Phone (435)687-5310 Fax (435)687-5311

E-Mail talonnetv.net

## SUMMIT OPERATING

State #8-32-16-22

Section 32, T13S, R22E, S.L.B.&M.

Uintah County, Utah

### LEGEND:

- EXISTING WELL
- PROPOSED/STAKED WELL
- ▲ PROPOSED WELL
- PROPOSED ROAD
- EXISTING ROAD
- - - LEASE BOUNDARY

Drawn By  
J. STANSFIELD

Checked By  
L.W.J.

Drawing No.

Date:  
11/06/05

L-1

Scale:  
1" = 2000'

Sheet 1 of 1

Job No.  
2082

DIVISION OF OIL, GAS AND MINING  
**Wildcat Well Determination**  
**STATEMENT OF BASIS**

**Applicant:** Summit Operating, LLC

**Location:** SENE Sec 32 T13S R22E, Uintah County, Utah

**WELL NAME:** STATE 8-32-13-22 **API #:** 43-047-37521

**FINDINGS**

1. This well was completed on November 15, 2007 in the Entrada-Slick Rock Member formation.
2. This well was > 1 mile from any known production in the Entrada-Slick Rock Member Formation at the time of the completion and the start of commercial production. (Attachment A)
3. The Wildcat Tax Credit application was received 1+ years after completion of the State 8-32-13-22 well (see submittal requirements in R649-3-35-1).

**CONCLUSIONS**

Future requests for wildcat well determination should be submitted in accordance with R649-3-35-1. Based on the findings above the Division has determined the State 8-32-13-22 well was drilled into an unknown area for the Entrada-Slick Rock Member formation. The Division finds that this well qualifies for the severance tax exemption under Section 59-5-102(2)(d) for wildcat wells. This determination was made in accordance with Oil and Gas General Conservation Rule R649-3-35. If the operator disagrees with this determination, the decision may be appealed to the Board of Oil Gas and Mining.

Reviewer(s): Dustin K. Doucet

*DKD*

Date:

3/4/09

Joshua J. Payne

Date: March 3, 2009

CC: Utah State Tax Commission  
ATTN: Ken Petersen

**ATTACHMENT A**

**1 Mile Area of Review**

API	WELL NAME	Well Status	Qtr	Sect	Town	Range	Cum Oil	Cum Gas	Field Type	Dx From Well(ft)	Rotary Spud	Date TD reached	Date First Produced	Producing Formation
4304737713	STATE 10-32-13-22	LA	NWSE	32	130S	220E	0	0	W	2276				
4304737521	STATE 8-32-13-22	PGW	SENE	32	130S	220E	3	60864	W	0	8/1/2007	8/11/2007	11/15/2007	Entrada
4304737520	STATE 16-32-13-22	LA	SESE	32	130S	220E	0	0	W	2767				



UTAH DEPARTMENT OF NATURAL RESOURCES

Division of Oil, Gas & Mining

Oil and Gas Program

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

NOTICE OF VIOLATION

STATE OF UTAH

OIL AND GAS CONSERVATION ACT

\*\*\*\*\*

To the following operator:

Name: Summit Operating, LLC  
Well or Site: State 8-32-13-22 API #: 43-047-37521  
Location: Township 13S, Range 22E, Section 32, County Uintah  
Date and time of inspection: 3/24/09 11:00 AM  
Mailing Address: 1441 Ute Blvd. STE 280  
Park City Utah, 84098-7628

Under the authority of the Utah Oil and Gas Conservation Act, Section 40-6 et. Seq., Utah Code Annotated, 1953, as amended, the undersigned authorized representative of the Division of Oil, Gas and Mining has conducted an inspection of the above described site and/or records on the above date and has found alleged violation(s) of the act, rules or permit conditions as described below.

Description of Violation(s):

Rule R649- 3-15 Reserve pit has been open over two  
years; liner has deteriorated. Pit must be reclaimed.  
sprinkler system must be turned off immediately  
and remainder of production water in pit must  
be disposed of in a state approved facility.

Additional information/materials attached Y/N (circle one)

This notice shall remain in effect until it is modified, terminated, or vacated by a written notice of an authorized representative of the director of the Division of Oil, Gas and Mining.

Compliance Deadline: 4/25/09

Date of Service Mailing: 3/25/2009 Time of Service Mailing: 4:00 p.m.

David M. Sheffield

Division's Representative

Operator or Representative

(If presented in person)

6/2005

CERTIFIED MAIL NO.: 7004 1160 0003 0190 2716

7004 1160 0003 0190 2716